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Controversies

*The Alcohol
Question.*

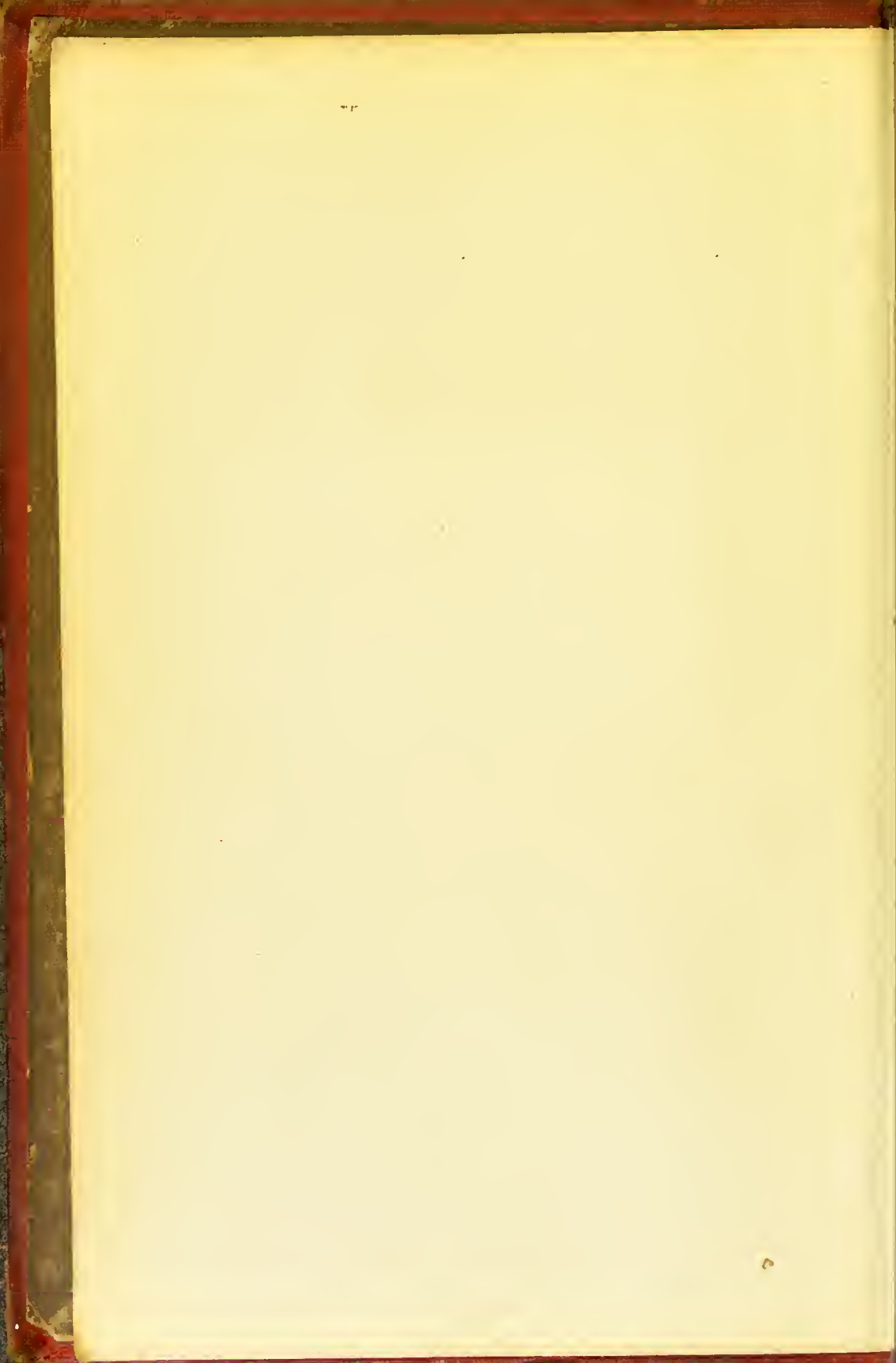
[By Sir James Paget, Bart.,
Sir William Gull, Bart.,
And others.]

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CONTEMPORARY

CONTROVERSIES.

THE ALCOHOL QUESTION



THE ALCOHOL QUESTION

BY

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ADVERTISEMENT.

IT has been suggested from many quarters that the papers on the Alcohol Question which appeared in recent numbers of *The Contemporary Review* should be printed in separate form for still wider circulation.

I have much pleasure in complying with this suggestion, and, while doing so, I beg to state that the purpose of this important series of articles was not to support any preconceived view, either for or against the use of alcohol, but simply to elicit the highest medical opinion on the subject. Consequently, in the applications made to writers, regard was had only to eminence of position, as giving authority to what-

ever views might be expressed, without seeking to forecast to which side the judgments would incline. It was felt that the important thing was to obtain a scientific deliverance which could be of thoroughly practical use to all taking interest in the Alcohol Question—whether legislators, clergymen, philanthropists, or social reformers generally.

ALEXANDER STRAHAN.

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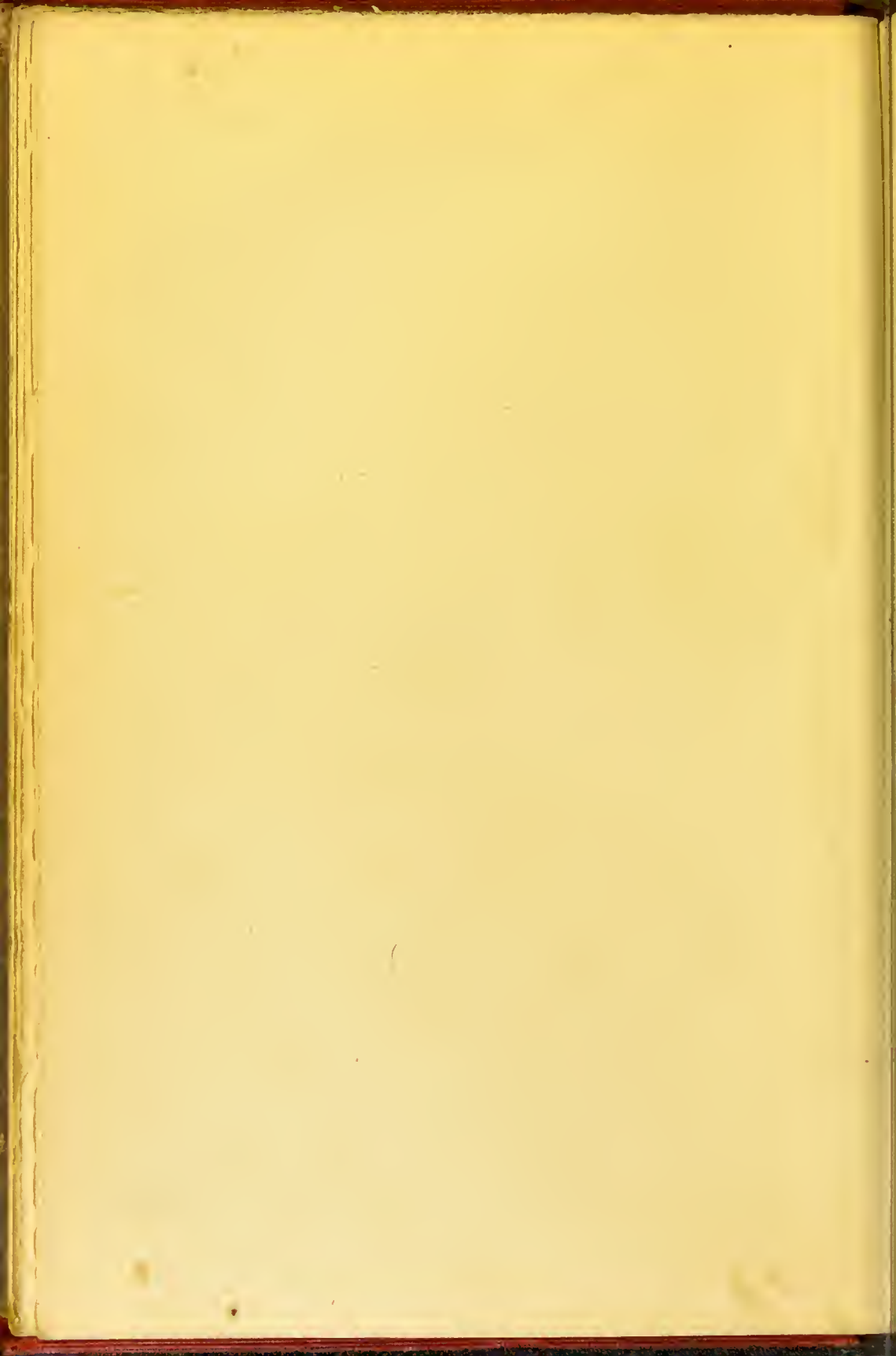
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I.

THE CONTRAST OF TEMPERANCE
WITH ABSTINENCE.

BY SIR JAMES PAGET, BART., F.R.C.S., D.C.L., LL.D.,
F.R.S.



I.

THE CONTRAST OF TEMPERANCE WITH ABSTINENCE.

IT may be assumed that there is no need now to write such arguments against intemperance as would be required if it were defended by any reasonable sober person. All reasonable people hold it to be a hideous evil, and few know more of its mischiefs than do surgeons, who see its baneful influence in multiplying the injuries due to accident and violence, and in hugely increasing the danger and mortality of operations and of injuries such as sober people bear with impunity.

The arguments against intemperance are complete and unanswerable, and in favour or defence of it there are none. But the necessity of total abstinence from alcoholic drinks is now, as for a great national advantage, urged on those who are habitually moderate with nearly as much vehemence as on the habitual drunkards. It is said by some that there is not any habitual use of alcoholic drinks which is not imprudent, even

if it may not be called intemperate, and that even in small quantities they are always and to all healthy persons injurious, slowly, it may be, but surely. And some, who see in them no direct harm, yet maintain that they are useless and unnecessary, and ought to be disused, so that, by overwhelming examples and custom of total abstinence, the crime and folly of intemperance may be put down. Statements such as these are confidently made; but if we look for evidence there seems to be very little in favour of them, and there is more that inclines the other way. The whole of the evidence, indeed, which has as yet been collected for a comparison of the respective influences of temperance and of abstinence on nations or on large bodies of men, may seem not sufficient for a complete final decision. The subject is a very large one and very complicated; and, though the central question may seem narrow, it is involved in so many more that the final general answer must be subject to exceptions for particular cases, only to be settled by many future and very careful researches. Still, on the whole, and on the question of national health and strength, I cannot doubt, with such evidence as we have, that the habitual moderate use of alcoholic drinks is generally beneficial, and

that in the question raised between temperance and abstinence the verdict should be in favour of temperance.

The evidence of the evils of intemperance is abundant, clear, and complete. If any one accustomed to weigh facts will compare with it what is given as the evidence of the evils of a moderate use of alcohol, this must appear as, at the best, quite insignificant. Against intemperance we have the vast experience of life-assurance offices, the records of large hospitals, the unanimous opinion of all practitioners of medicine, the results of all physiological studies, the belief of all reasonable persons. Against moderation we have none of these.

So far as I know, no large insurance-office or general hospital has yet begun to collect facts for statistics bearing on the respective influences of moderation and of abstinence. Their records are of the "temperate" and the "intemperate" in various degrees; if they have any records of the "total abstainers," they are far too few for any useful comparison. And it is hard to see how in any of these institutions sufficient statistics can be gained for a decision on the general influences of habits so little apart, and practised under so great variety of con-

ditions, as are moderation and abstinence. The least that could be used with any chance of getting at the truth would be a careful comparison of five hundred total abstainers who have never been intemperate, and were not born of intemperate parents, with five hundred habitually moderate persons similarly born and bred, pursuing similar callings, and living under generally similar conditions; and this comparison should have regard not only to average length of life and to health at different periods of life, but to the quantity of muscular work and of good mental work done by each group. With less evidence than such comparison as this might supply, I cannot suppose that any statistics can be worth using in the question between moderation and abstinence. The reports of the health of prisoners, and of the quantities of work done by them, whilst both total abstinence and work are compulsory, cannot safely be used. Two sets of conditions can hardly be more unlike than those in a prison and those out of it. In the prison every arrangement is made for the maintenance of health and of fitness for work; every arrangement must be submitted to as absolutely as total abstinence; every prisoner's day's work must be done. But

we cannot so much as guess what would be the health and what the power and kind of work of the same prisoners if, when free, they could do as they please in everything but total abstinence. And what is true of prisoners is, in this view, equally true of the inmates of work-houses.

Thus we have no statistics, and are not within reach of any, for deciding the question between moderation and abstinence.

As for the opinions of the medical profession, they are, by a vast majority, in favour of moderation. It may be admitted that, of late years, the number of cases has increased in which habitual abstinence from alcoholic drinks has been deemed even better than habitual moderation. But, excluding those of children and young persons, the number of these cases is still very small, and few of them have been observed through a long course of years, so as to test the probable influence of a life-long habitual abstinence. Whatever weight, then, may be assigned to the balance of opinions among medical men, it certainly must be given in favour of moderation, not of abstinence.

Then, we have some deductions from physiological observations which are supposed to indicate

a mischief in even habitual moderation. But some of these are really such that if, in the place of "alcohol" we were to read "common salt," we should be led to conclude, if it were not for experience to the contrary, that we are destroying ourselves by the daily excessive use of a material which, in its excess, can alter the constitution of our blood, or the permeability or other properties of our tissues. And even the best of the physiological observations on alcohol do not touch the question between abstinence and moderation more nearly than as suggesting some of the directions which further inquiries should take. Medical science has always been full of facts derived from physiology; facts which seemed certainly good guides to practice, safe signals of what must be true for training in health or for remedy of disease. Some of these have so proved themselves, and have led to some of the best knowledge we possess; but many more have proved fallacious; and I suppose that all who are actively engaged in practice are sure that experience alone can be trusted for deciding the practical value of a deduction from physiology. Till we have this experience, large and clear, we must not regard the facts of physiology concerning alcohol as more than

reasonable suggestions, facts, or opinions, to be received with all respect, but to be practically tested before they can be regarded as practically useful, or as decisive of the question now discussed.

The beliefs of reasonable people are, doubtless, by a large majority favourable to moderation rather than abstinence, and this should not be regarded as of no weight in the discussion. For, although the subject be one in which few even among reasonable people have made any careful observations, and fewer still have thought with any care, yet this very indifference to the subject, this readiness to fall in with custom, a custom maintained in the midst of a constant love of change, and outliving all that mere fashion has sustained,—all this is enough to prove that the evidence of the custom being a bad one is not clear.

Thus, then, from all the witnesses to the evils of intemperance we fail to get any clear evidence that there is mischief in moderation. Looking further we find in them certain indications that it is, on the whole, generally beneficial. The long-abiding custom of which I just now spoke makes this very probable. The use of alcohol, and, speaking generally, its habitually moderate

use, has been for many centuries the custom of a large majority of civilized nations. We may safely say that there is a natural disposition among adult men to drink; a natural taste for alcoholic drinks, whether for their cheering influence or for any other reason. In the absence of any clear evidence to the contrary there must be a presumption that such a natural taste has its purpose rather for good than for evil. In a general view of the natural tastes of all creatures for foods and drinks, we see that tastes are guides to good and not to evil. There may be an exception in our own case in relation to alcoholic drinks; there may have been a universal fallacy in the minds of even reasonable, virtuous, and self-denying people, who have believed that in the moderate use of wine or beer they gratified a natural and useful desire; but the evidence of such a mistake ought to be very clear.

For when it is said that the taste for these drinks is not natural, but artificial or acquired, there is error as to what in this case "natural" should mean. Our natural state is that in which we now live; the present state is to each race of men, if not to every one man, the natural state; the state attained in the natural course of development. In this state men are disposed to drink

alcoholic liquids, and the presumption must be that these drinks are beneficially adjusted to some of the conditions of our life which have been attained in our development from some less civilized or completely savage state. Considering how largely our nature has been changed from that state by the gradual developments of society, and by the various habits, dispositions, and capacities therewith associated, it is in the highest degree probable that, with these changes, we should have beneficial adjustments of different foods or other means of sustaining us in our work. Among these we may reckon the greater part of the comforts and of what now seem to be the necessities of our civilized, that is, our natural state, such as wheaten bread, potatoes, cultivated fruits, and well-fed meats; and, similarly, among them we may reckon, unless there be clear reason to the contrary, such things as tea, coffee, and alcoholic drinks, and, I even venture to think, tobacco, though, probably, for only much smaller groups of men. Doubtless all these things are used by some persons in a mischievous excess; but so may be bread and cheese; and many persons, complying with custom or fashion, may use them to whom even in moderation they are useless or mischievous; but the fact of general

or nearly universal custom is, in a matter of this kind, very weighty; it gives a strong presumption in favour of the belief that these are beneficially adjusted to natural necessities. And the presumption is equally strong, whether we regard the matter from the view of natural theology, and think of these things as providential insertions in a divinely guided course of nature, or from the view of natural history, where they may appear as instances in which the gradually developing human mind discerned, though it may have been almost unconsciously, the things fittest for its maintenance and progress. All our foods have thus been provided or chosen; they have suited men's tastes, and therefore have been desired and used, without any clear knowledge of their utility and fitness. Science has ascertained the reasons for their fitness; in the same course it may, in time, make us more sure of the fitness of the moderate use of alcohol.

The presumption in favour of moderation being generally better than abstinence is strengthened by a comparison very broadly made between those of our race who do not and those who do habitually use alcoholic drinks. In this view we may broadly compare the Eastern with the Western races, adding to these the North Ameri-

cans, Canadians, and Australians. We may again take, as fair tests of the comparative influences of moderation and of abstinence, the average length of life, average health, the quantity of muscular work, and the quantity of mental work. For the first two we have, I think, no evidence that can be relied on; but, at least, there is no reason to suppose that the Easterns live longer or are healthier than the Westerns and their descendants. But as to working power, whether bodily or mental, there can be no question that the advantage is on the side of those who use alcoholic drinks. And it is advantage of this kind which is most to be desired. Longevity is not the only or the best test of the value of the things on which we live. It may be only a long old age, or a long course of years of idleness or dulness, useless alike to the individual and the race. That which is most to be desired is a national power and will for good working and good thinking, and a long duration of the period of life fittest for these; and facts show that these are more nearly attained by the peoples that drink alcohol than by those who do not. It may not be positively asserted that the alcohol does this good; it may be due to many other things; but in trying to account for

it the influence of alcohol must not be excluded or counted as evil.

We find a similar result in a comparison of the races of Europe, among whom different proportions of alcoholic drinks are habitually consumed. Comparing North with South we certainly compare those who drink more with those who drink less; and the advantage is with those who drink more, especially when we compare them in respect of general activity and force of mind and body, in readiness and fitness for work, in enterprise, invention, production, and all the signs of the best mental activity and strength. Doubtless, in all these cases, the result may depend more on other conditions than on the use of alcohol; possibly, it may be even in spite of alcohol; but this is neither proved nor probable, and we have no right to imagine it.

It is to be observed that, in all these comparisons, the case in favour of moderation is burdened by the inclusion of the intemperate among the moderate. If the shortened lives and damaged healths, the idleness and bad work, of the drunkards, and all the miseries entailed upon their children, could be excluded from the reckoning, the evidence in favour of alcohol would be very greatly strengthened, and the reasons for

preferring moderation to abstinence might seem conclusive.

We are bound, further, to consider the great length of time during which the nations compared have followed their different habits in regard to drinking. Let us count it—for the sake of a round number—at a thousand years, a time much below the truth. Knowing as we do the mischiefs that are transmitted through inheritance from the intemperate, it is hardly conceivable that, if moderation were in any degree mischievous, its evils should not by this time have become very evident. The accumulated evils of thirty generations of men given to moderate drinking should now be notable; they should have risen to the level of the manifest evils of one or two generations of excess, or, if they were not positively distinct, they should have appeared in a comparison of the heirs of these drinking generations with the heirs of thirty generations of abstainers. But the result is the reverse of this. West against East, North against South, the heirs of the moderate drinkers are better men in force of body and mind than are the heirs of the abstainers. I say, of moderate drinkers. Some would say that before our time there have been centuries of habitual vile intem-

perance, and that our ancestors, for so long as we have records of them, drank hideously hard. I do not believe this. We have tales of the intemperance as of all the other extravagances of former times, and, as usual, the more customary moderation is not recorded, being not remarkable. But the worse that is said of our ancestors the less does any probability of harm, and the greater does the probability of good, from alcohol appear.

It may be worth pointing out how great would be the force of any hereditary evil accumulated in a succession of many generations. Blackstone says, "It is, at the first view, astonishing to consider the number of lineal ancestors which every man hath within no very great number of degrees; and so many different bloods is a man said to contain in his veins as he hath lineal ancestors. Of these, he hath two in the first ascending degree, his own parents; he hath four in the second, the parents of his father and the parents of his mother; he hath eight in the third, the parents of his two grandfathers and two grandmothers; and by the same rule of progression he hath an hundred and twenty-eight in the seventh, a thousand and twenty-four in the tenth, and, at the twentieth degree, or the distance of twenty generations, every man

hath above a million of ancestors, as common arithmetic will demonstrate.”*

This calculation is not quite accurate, for it neglects the cases of marriages of cousins and of other blood-relations. A person who is the offspring of first cousins may count only six great-grandparents ; but, allowing for these and all such cases, we may safely estimate that at “the distance of twenty generations every man hath” many more than half a million of ancestors : and the estimate of “above a million,” though inaccurate for the number of ancestors, is necessarily accurate for the number of times of transmission of hereditary properties, and of the converging lines along which, in twenty generations, they must meet on every one born in the twenty-first. Let us then suppose that the moderate use of alcoholic drinks is, in even a very small degree, mischievous, and that the evil due to it is in some degree transmissible, as are those of intemperance, by inheritance : what should be the condition of every one among us, seeing that on each of us some measure of evil must have come along each of more than a million lines with constantly accumulating and convergent force ? It may be said that there were, probably, many total abstainers among

* Commentaries. Ed. Sweet, 1844. Vol. ii. p. 202.

the half-million or more of ancestors, but, as probably, there were many drunkards ; and these two groups, each of which we may be nearly sure were a small minority of the whole number, may balance one another, and leave us free to think of the influence of several hundreds of thousands of transmissions of whatever evils can be transmitted from the effects of habitual moderation. I think it would be difficult to find a healthy family born of three successive generations of drunkards, or of persons all suffering with the same heritable disease. If, then, healthy families are born after thirty generations of habitual drinkers of alcohol, how can we fairly charge its moderate use with doing mischief? Is it not fair to think it probable that it has rather been beneficial, and one among the conditions to which we owe the still gradually increasing healthiness and working power of our race? At least it must seem clear that the effects of excess, and those of moderation, in the use of alcoholic drinks are so incomparably different in degree, that they may be reckoned as different in kind ; and that though the one is always injurious, the other may be always harmless, and often or usually beneficial.

It is, perhaps, due to the want of a sufficient appreciation of the different effects of the same

substance, or the same force, applied in different quantities to the living body, that a moderate use of alcoholic drinks appears to some persons to be necessarily mischievous. If a large quantity does great harm, a smaller quantity, it is thought, must do some harm, however much less it may be. But the facts are the other way. Large quantities of quinine will make a man, at least for a time, deaf and blind ; smaller quantities may do nothing of the kind, but may cure his ague ; and yet smaller may leave him with his ague and all his senses unaffected, but may improve his appetite. One quantity of arsenic may kill any man ; another much smaller may strengthen him, or cure his neuralgia, or some disease of his skin. Or a Styrian may (perhaps) be all the better for taking, in a year, as much arsenic as, if he took it in a day, would be fatal to him. And the same thing is to be seen in other conditions, though less plainly than in the use of poisons and medicines. The best way to make muscles large and strong is by moderate exercise gradually increased ; by the same exercises in excess they may be weakened and brought to waste : the nerves of sight and hearing may be improved by moderate and graduated exercises, ruined by excess of similar exercises : our cuticle may be made to grow thick

and strong by duly adjusted friction, and may be spoiled or detached by similar friction not duly adjusted. And the rule is very general: the same influences which in one degree are destructive, are, in a less degree, beneficial. It would only be consistent with this rule that alcohol should be, in large quantities, injurious, in small quantities useful.

I have dealt with the question between temperance and abstinence entirely from the side from which my profession has enabled me to study it so far as may justify my giving an opinion on it. My study makes me as sure as I would ever venture to be on any such question, that there is not yet any evidence nearly sufficient to make it probable that a moderate habitual use of alcoholic drinks is generally, or even to many persons, injurious; and that there are sufficient reasons for believing that such an habitual use is, on the whole and generally, beneficial. It may be assumed that further study of the matter, by competent and calmly minded scientific persons, will discover many facts concerning the use of alcohol which will lead to the remedy of such harm as, even in moderation, it may do to some persons, or to some whole races of men, and to its use being better directed and limited than in our present customs.

But knowledge of this kind will not change the general conclusion in favour of the general utility of a moderate use of alcoholic drinks ; and till this knowledge is gained every one may assume that he may safely use them in such moderation as he does not find to be injurious.

But, as I have said, there are many who, even if they would admit this, would yet maintain that the mischiefs of intemperance are so much greater than any conceivable advantages of moderation, that we ought not to promote or defend moderation, because its promotion hinders the general adoption of total abstinence, which, they say, is the necessary and only sure remedy for intemperance. Here, I can only doubt. I should think that in this, as in other things lawful yet tempting to excess, the discipline of moderation is better than the discipline of abstinence. But it is certain that we have no facts at all by which to estimate whether the whole benefits of moderation, or the whole possible benefits or evils of total abstinence, or the whole sure evils of intemperance, would be the greater ; we have nothing from which we may make even a fair guess, or which would justify a great experiment. Without such knowledge it seems unreasonable to urge the discontinuance of a custom which is certainly pleasant and probably

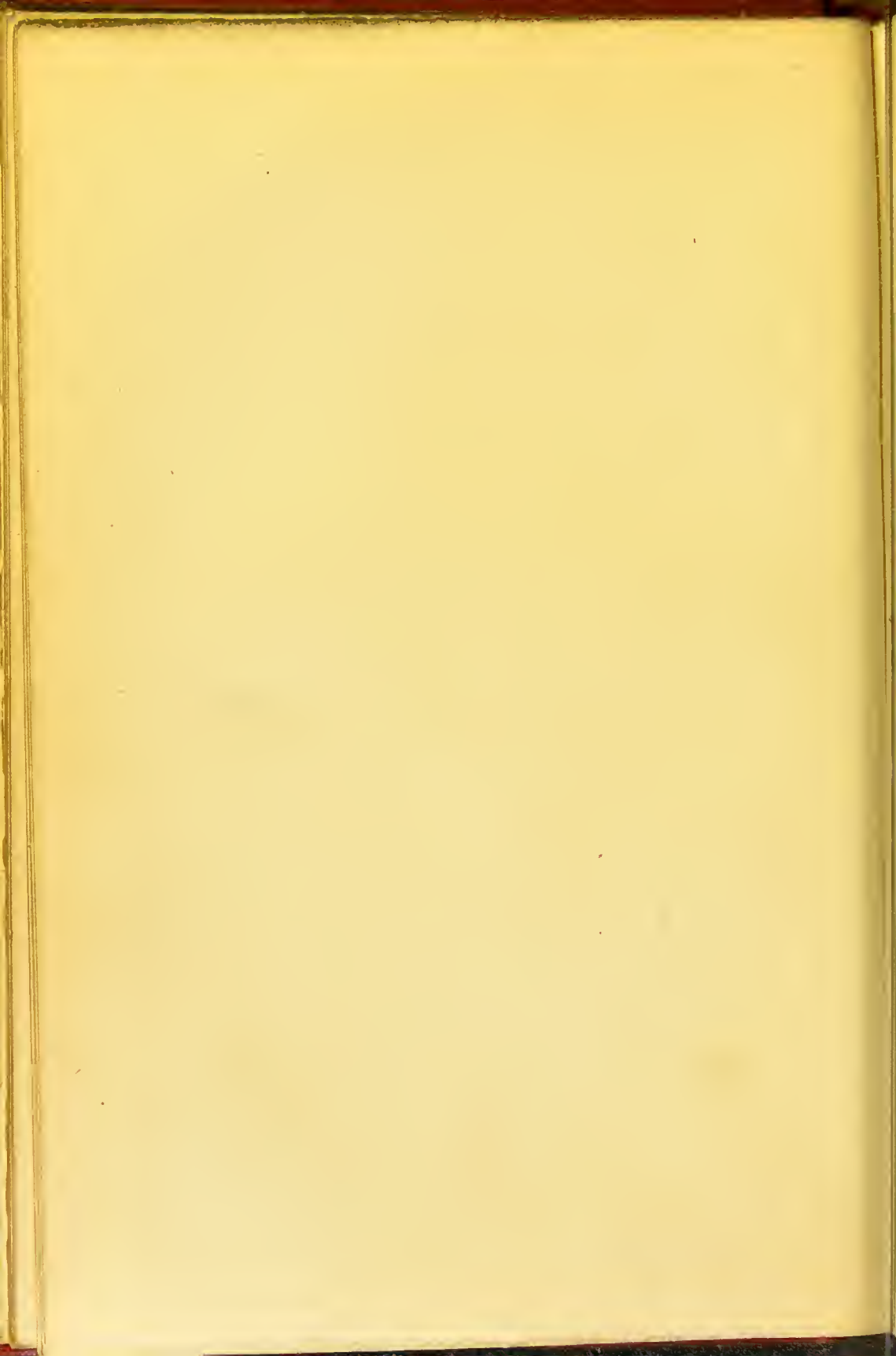
useful: and very unreasonable to require temperate persons, who are an immense majority of the population, to cease to do that which is lawful, useful, and agreeable, in order that the intemperate minority may be induced to cease to do that which is unlawful and mischievous. It would be not less unreasonable to urge that honest people should cease to gain money because there are some misers, thieves, and swindlers.

But some will say, What is this moderation? How may we define it? Let those who thus ask try to define, to the satisfaction of any ten persons, what, under all circumstances and to all people, is moderation in bread or the wearing of jewels, in hunting or the language of controversy.

II.

THE ACTION OF ALCOHOL.

BY T. LAUDER BRUNTON, M.D., F.R.C.P., F.R.S.



II.

THE ACTION OF ALCOHOL.

THE abuse of alcohol is universally condemned, and every one blames the conduct of the man who, by excessive indulgence in alcoholic liquors, ruins his health, destroys his character, and impoverishes his family. But some persons, not content with condemning the abuse, object entirely to the use of alcohol, affirming that it is injurious even when taken in the smallest quantities, and that it is of no service under any circumstances whatever. Others maintain that the moderate use of alcohol not only adds to their enjoyment without doing them any harm, but that it actually makes them better and stronger, rendering them more lively and agreeable in their social relations, and enabling them to work harder, to think more clearly, to write more elegantly, and to speak more fluently. In this, as in many other things, the truth lies between the extremes. Both of these opinions contain a certain amount of truth, but neither

represents the whole truth. Each may be true of certain individuals, but neither is true for all. There are some persons on whom the smallest quantity of alcohol seems to act like the taste of blood on a tiger, producing in them a wild desire for more, and destroying all self-control. For them alcohol is a poison, and total abstinence is their only safeguard. There are others, again, who can do more mental work, and perhaps work of a better quality, by means of alcohol, than they could do without it, and who, when under its influence, are more sprightly, witty, and agreeable, than at other times. Such persons may sometimes go on taking alcohol in moderation for a long time without doing themselves much harm, but they run a great risk. For the very increase in power which the alcohol gives them is apt to induce them to use it more and more, and when their nervous system begins to fail under the combined effect of the excessive demands upon it which alcohol enables them to make, and the destructive action of excessive drinking itself, their self-control disappears, and they may sink into a drunkard's grave. Were it not for this risk, the use of alcohol might be regarded as advantageous in those who are called upon to work only in "spurts," or to appear as

pleasant companions or brilliant talkers only for a short time in each day, and who are able to take abundant rest during the intervals, so as to allow time to repair the waste caused by the inordinate strain upon their powers during their periods of activity. But the number of men in this position is comparatively small, and most people are called on to do steady work day after day, and to make themselves, at all times, at least fairly agreeable to those whom they meet. For all such, alcohol is of little use so long as they are young and strong. They may possibly take it occasionally as a luxury, but if they eat well and sleep well, they will, as a rule, do more work, mental or bodily, and be better without it. It is in those who are past middle age, and whose strength is declining with advancing years, in those who are debilitated by unfavourable external circumstances, or in those who are prostrated by disease, that alcohol most clearly exerts a beneficial action, and, when properly used, it becomes as powerful for good as it is for evil when abused.

In order to understand what its uses are, we must try to obtain an accurate knowledge of the action which alcohol really exerts on the body. The two chief reasons given for its consumption

are, first, that it is a food, and, second, that it is a stimulant. As different persons may attach different meanings to the words "food" and "stimulant," it may be well, before going any further, to explain what we understand by them. By food we mean something which is consumed in the body, and which supplies energy to it in somewhat the same way that fuel supplies energy to the steam-engine. This definition is perhaps too limited, excluding as it does certain substances, scientifically recognized as foods, such as lime and other mineral substances, which supply no energy to the body, but serve to keep it in repair, just as iron and brass are occasionally required to repair the results of wear and tear in the steam-engine. It corresponds, however, more closely to the popular idea of food, and is, we think, the best for our present purpose. A stimulant is something which enables us to get more work than usual out of the body or one of its parts in a given time, just as a steam-engine may be made to do more in a given time by working it at a higher pressure.

We will first consider what claims alcohol has to be reckoned a food, and perhaps this can be best done by comparing it with a substance, like sugar, whose claim to the title of food no one

doubts. If we find that alcohol possesses those qualities which entitle sugar to rank as a food, we must admit that it also deserves the name. Sugar disappears in the body as the fuel does in the steam-engine; and although it will not support life if given alone, yet along with other food it will supply energy for increased work, or prevent the body from wasting. In these points alcohol resembles sugar. It disappears in the body, and although it will not of itself support life entirely, yet instances are on record of persons having lived for a considerable time with scarcely any other food. Hammond observed also, that when his diet was insufficient, the addition of a little alcohol to it not only prevented him from losing weight as he had previously done, but converted this loss into a positive gain. The objection may be urged that some observers have found alcohol pass out unchanged from the body, and that it therefore cannot be ranked as a food. But the same objection applies to sugar, for the experiments just referred to were made with large quantities of alcohol, and when much sugar is taken at once, it will also be excreted unchanged.

As alcohol, then, agrees with sugar in its essential qualities, we may regard its title to the name of food as completely established. But there are

various sorts of food, as well as various sorts of fuel; and although alcohol may be a food like sugar, its use may not be so generally convenient. Sulphur is a fuel, as well as coal, but one would not dream of using it to warm a room. It serves to tip a lucifer match, but if burned in a grate the products of combustion would corrode everything in the neighbourhood, and, if it were mixed with coal, would hinder its burning. Now alcohol somewhat resembles sulphur in this respect, for it has the curious property of interfering with the combustion of other substances in the body while it is decomposed itself. Thus, whilst it is a useful food in fevers and other diseases when little else can be taken, it can hardly be regarded as a convenient food in health.

We now come to the action of alcohol as a stimulant—as something which will enable the body, or one of its parts, to do more work in a given time than can be accomplished without it. In a large factory, where steam is conveyed from a central boiler to different machines throughout the building, the amount of work done by any one machine will depend upon the pressure of steam in the boiler itself, and the quantity which is allowed to pass to that particular machine. In the body the work depends very much upon the pressure of

blood in the vessels, and the activity of any organ corresponds closely with the amount of blood which passes to it. When the brain is active, its vessels become full, and the blood pours rapidly through them. The same is the case with the stomach during digestion, and with the muscles during exercise. Thus, when any organ is in action, it takes more blood than it does during rest, and the quantity which goes to the other organs is proportionately less, so that they are unable to act all together unless the heart be stimulated and the circulation generally increased. When a person is weak, and his circulation languid, he will go to sleep after dinner, or, if compelled to use his brain at such a time, his digestion will suffer. If suddenly asked a question while walking, he will stand still to think before he answers it. The supply of blood being insufficient for more than one organ at a time, his brain cannot act while his stomach is digesting or his muscles are in exercise, and his stomach cannot digest if his blood be called away from it to the brain. Should, however, the heart be stimulated, and the circulation thus be accelerated, each organ may receive an abundant supply, and brain, muscles, and stomach may all act at once without interfering with one another. Such an active circulation

is generally associated with a sense of well-being and power, and such things as induce this condition are universally sought for by mankind. The old Norsemen found it in the furious excitement of battle, and when the fight was over they stimulated their flagging pulses by wild carousal. While cold depresses the circulation, heat increases it, and the people of southern climes have therefore less need of artificial stimulants than the inhabitants of the frigid north, yet they, too, stimulate their circulation, and find pleasure in the excitement offered by games of chance.

It is the sense of well-being and power which alcohol gives that constitutes its chief attraction as a luxury, although the pleasure afforded to the palate by the bouquet of choice wines is not to be entirely overlooked. This sense of strength and comfort may be entirely subjective, and, although it may be real at first, may continue to be felt after the power has ceased, so that an individual under the influence of liquor fancies himself able to perform feats of which he is utterly incapable, and may suppose himself in a palace while he is wallowing in a sty.

The action of alcohol as a stimulant is twofold. It will stimulate the circulation reflexly, as it is termed, through the nerves of the stomach, and

also directly by its action on the heart while passing through it with the blood. By reflex stimulation we mean that an impression made upon some part of the body, as the skin, the mouth, or the stomach, is transmitted along a sensory nerve up to a nerve centre, such as the brain, and thence passes back along a motor or efferent nerve to a muscle, such as the heart, the muscles of the limbs, or those muscular fibres which, surrounding the vessels, regulate their size, and consequently the flow of blood through them. Thus, cold water dashed on the face of a fainting person will quicken the heart, and bring back colour to the pallid cheek. The water has not reached the heart, but the stimulation of the cold has been transmitted by the sensory nerves from the skin of the face to the brain, and thence to the heart and vessels. A glass of cold water drunk when the faint is coming on will prevent the circulation from becoming too languid, and will remove the feeling of weakness. Here, also, the water has not reached the heart or vessels, but has merely acted upon them through the sensory nerves of the stomach in the same way as it did in the other case through the sensory nerves of the skin.

But it is not merely the circulation generally

which can be thus reflexly stimulated. It seems probable that the circulation in the brain alone may be increased, and mental processes quickened, by reflex action from the skin. There are two nerves, known as the fifth pair, which are distributed to the skin of the head, and to the mucous membrane of the eyes, nose, and mouth. These nerves are closely connected with the heart and vessels, and by stimulating their branches the circulation may be greatly influenced, as in the case of fainting just alluded to. It is a curious fact that people of all nations are accustomed, when in any difficulty, to stimulate one or another branch of the fifth nerve, and quicken their mental processes. Thus, some persons, when puzzled, scratch their heads; others rub their foreheads, and others stroke or pull their beards, thus stimulating the occipital, frontal, or mental branches of those nerves. Many Germans, when thinking, have a habit of striking their fingers against their noses, and thus stimulating the nasal cutaneous branches; while in this country some people stimulate the branches distributed to the mucous membrane of the nose by taking snuff. The late Lord Derby, when translating Homer, was accustomed to eat brandied cherries. One man will eat figs whilst composing a leading article, another will

suck chocolate crèmes; some will smoke cigarettes, and others sip brandy-and-water. By these means they stimulate the lingual and buccal branches of the fifth nerve, and thus reflexly excite their brains. Alcohol appears to excite the circulation through the brain reflexly from the mouth, and to stimulate the heart reflexly from the stomach, even before it is absorbed into the blood. Shortly after it has been swallowed, however, it is absorbed from the stomach, and passes with the blood to the heart, to the brain, and to the other parts of the nervous system upon which it then begins to act directly. Under its influence the heart beats more quickly, the blood circulates more freely, and thus the functional power of the various organs in the body is increased, so that the brain may think more rapidly, the muscles act more powerfully, and the stomach digest more easily. But with this exception, the effect of alcohol upon the nervous system may be described as one of progressive paralysis. The higher centres suffer first, and the judgment is probably the first quality to be impaired. One of the most esteemed novelists of the present day informs me that, although he can take a great deal of wine without its having any apparent effect on him, yet a single glass of sherry is

enough to take the fine edge off his intellect. He is able to write easily and fluently in the evening, after taking dinner and drinking wine, but what he then writes will not bear his own criticism next morning, although, curiously enough, it may seem to him excellent at the time of writing. As the effect of alcohol progresses, judgment becomes still further impaired, although the other faculties of the mind may remain, not only undiminished by the direct action of the alcohol upon the brain, but greatly increased by the general excitement of the circulation. The imagination may thus be more vivid than usual, and the emotions more lively, and both, being more or less liberated from the control of the judgment, manifest themselves in sparkling wit or withering invective. Sheridan is said to have delivered his greatest speech under the influence of two bottles of champagne, which he had swallowed at a single draught; and in persons of over-cautious temperament, and too reserved manners, the removal of the excessive restraint under which they habitually act renders them for the time more sociable and agreeable. By-and-by, however, the other parts of the nervous system are successively weakened; the tongue stammers, the vision becomes double, the legs

fail, and the man falls insensible. It is evident, then, that only the first stages of alcoholic action are at all beneficial, the latter stages being as clearly injurious.

It is asserted by some that even these earlier stages are hurtful, and that any apparent increase of power obtained by the use of alcohol is gained at the expense of subsequent reaction. This is to some extent true, because it is evident that if the expenditure of energy by the body be quickened it cannot last so long, unless fresh energy be supplied by fresh food. This seems to be shown by the effect of alcohol on the pulse. Parkes found that the immediate effect of drinking spirits was to quicken the pulse, but that after a certain time its rate fell below the normal, so that in twenty-four hours the number of the heart's beats was the same whether alcohol had been taken or not. It seems probable that a similar condition occurs in the whole body when called upon to make, like the heart, continuous and prolonged exertions; and under such circumstances the use of alcohol appears to be injurious, the temporary stimulus supplied by it quickly passing off, and being succeeded by languor and weakness.

If the exertion required is to last only for a

short time, but is beyond the ordinary powers of the organism to perform, alcohol may be useful in calling, as it were, upon the reserve store of energy, and enabling a man to use up at once in one grand effort the energy which would usually suffice for a considerable time, but would be expended in little things. Alcohol may thus be very useful by imparting the power to accomplish a feat otherwise impossible, just as a bill may enable a merchant to tide over a crisis and complete a transaction which he could not have done with his current capital. So long as the merchant does not extend his liabilities too far, and the man does not make too great demands upon the reserve power of his organism, the one may employ bills and the other alcohol to accomplish his purpose, without injuring his credit or his health, but they run great risk whenever they exceed in the least, and great excess will lead to certain ruin. Lavish expenditure of money or strength must be followed by retrenchment, and the increased exertions made under the action of alcohol must be compensated by rest or food afterwards, unless the body is to break down completely. But just as the merchant by the proper use of bills may not only enlarge the sphere of his transactions, but add with certainty

to his capital, so a proper use of alcohol may not only stimulate a man to increased exertion for a time, but may help him to prevent any after-depression by the use of food. This was well shown by the experience gained in the Ashantee campaign. When the men, marching under a burning sun, began to flag, a ration of rum served out to them temporarily removed their fatigue, and enabled them to proceed briskly. If the increased exertion required of them had lasted only for a short time, the rum would have enabled them to bear it with ease; but, as it usually extended over some hours, the effect of the rum passed off and was succeeded by lassitude. Indeed, it was generally found that, after marching for three miles, the effect of the rum had completely disappeared, and was succeeded by a greater languor than before. If a second ration were now served out, its stimulating effect was less, its action more transient, and the succeeding weakness still greater. When beef-tea was served out instead of rum, it appeared to stimulate quite as well, and was not succeeded by any reaction. It was at the end of the march that the beneficial action of the rum was most clearly seen. After long exertion the nerves of the stomach appear to participate in the general fatigue, and food

then taken is not readily digested. If a small quantity of alcohol be taken first, it stimulates the secretion from the stomach, and quickens the circulation generally, thus enabling the food to be digested and absorbed so quickly that, before the effect of the alcohol has passed off, the products of digestion are already circulating in the blood, and keeping up the strength of the individual. In young men a short interval of rest between fatiguing exertion and a succeeding meal will enable the stomach to regain its power, and alcohol is then unnecessary, but in men above middle age, where the reparative processes are slower, the use of alcohol is desirable. In Ashantee the younger soldiers, who no doubt stretched themselves on the ground and rested after their march until the camp fires were lighted and their evening meal prepared, did not seem to care much for the ration of rum then served out to them, the rest being of itself sufficient to prepare them for their food. The elder men, over forty years of age, were not only glad of their own rations, but would take in addition those of their younger comrades who did not care for the spirit themselves.

When the stomach is debilitated by disease, or participates in the general weakness of the rest of

the body met with among residents in towns, alcohol may prove useful just as it does in fatigue, and Paul's advice to Timothy, "Drink no longer water, but use a little wine for thy stomach's sake, and thine often infirmities," was perfectly sound. It is when alcohol is taken without food that it does most harm, as seen on the march in the Ashantee campaign, and it is when taken with food that the benefits obtained from it are greatest.

If the rule to take alcohol only with meals be made and adhered to, there is much less danger of falling into habits of intoxication. It is of course possible to take too much alcohol with meals, but it is the practice of taking nips now and again that is most likely to lead to excess. The temptation to take these small quantities frequently arises either from the exigencies of business requiring men to make great efforts to which they feel themselves unequal, or from the occurrence of feelings of sinking and fatigue. These are readily relieved for the moment by a glass of sherry, or a nip of brandy, but the relief afforded by such stimuli is not likely to be lasting, and the feelings are very apt to return. They are so frequently met with amongst the inhabitants of large towns, who are either constantly engaged in business or occupied with social pleasures, that it

becomes of importance to discover what other means can be resorted to for their relief. It has already been mentioned that the circulation may be stimulated reflexly through the skin, the mouth, or the stomach, and these feelings may sometimes be removed by simply taking a biscuit and a little soda-water, by eating a little dried fruit, or, best of all, by a piece of bread with a little warm beef-tea. Some time ago, while walking in the Tyrol, a friend and myself made, as we thought, a new discovery, which enabled us to walk the whole day without fatigue. This simply consisted in eating something every two hours. When we allowed a longer period to elapse without taking food, we were apt to feel faint and tired, though not hungry, but these feelings at once left on our taking food, however little, and however simple. While still rejoicing in our discovery, however, we found that although new to us, it was well known to others, and that amongst the directions contained in our guide-book was a warning to travellers to eat frequently while crossing a glacier in order to prevent the faintness which often comes on whilst walking on the ice. Black bread and fat bacon were all that we required, but these, although palatable enough under the circumstances, might not be altogether to the taste of a city magnate

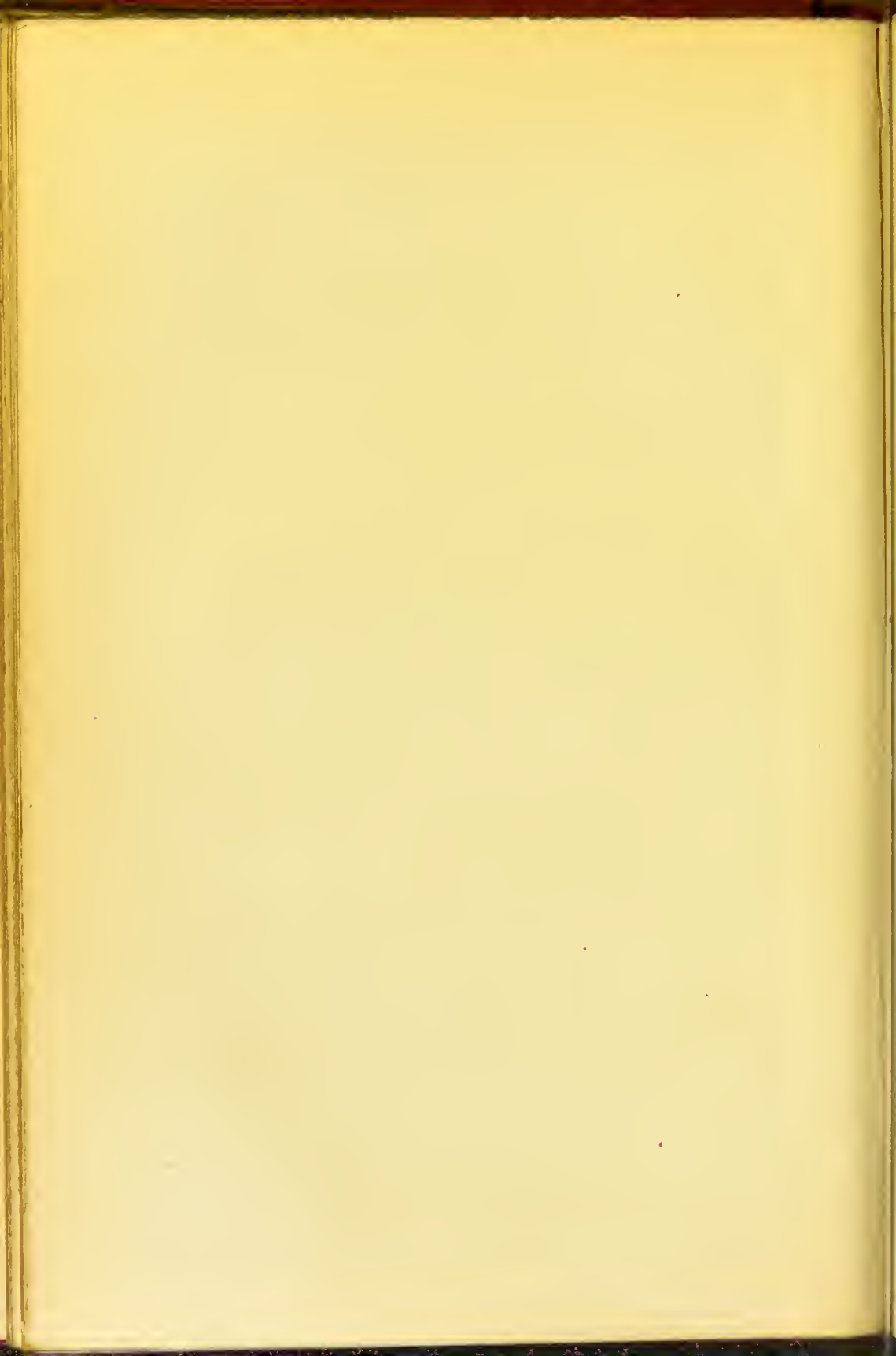
fainting under business but delighting in turtle, or of a belle sinking and languid during the intervals of dissipation. For them a little warm beef-tea and a biscuit would be preferable, or the raisins recommended by Sir William Gull, which supply an easily digestible food in the form of grape-sugar, at the same time that by their sweetness they stimulate the nerves of the tongue, and thus may increase the cerebral circulation and mental activity in the same way as scratching the head, taking snuff, or sipping brandy-and-water.

Amongst artisans I believe that a great temptation to take alcohol arises from bad cookery. Savoury food, both in man and animals, will cause the digestive juices to be freely secreted, as we can see in the case of the saliva which fills the mouth when a savoury smell is perceived. Anything disgusting will, on the contrary, stop the secretions, and bring on nausea and vomiting. Well-cooked and palatable food is therefore more digestible than unpalatable, and if the food should lack savour a desire naturally arises to supply it by artificial means such as condiments. After a meal containing sufficient nutriment for the wants of the system, but very plain and simple in character, a craving is sometimes felt for something more, although the person cannot say for what

he craves. This may be satisfied, as I have found by personal experience, by a little salt put on the tongue or, better still, by eating some dried or fresh fruit. Such a craving as this is very likely to lead the person who feels it to take spirits, and I believe does so very frequently. The remedy for this would, of course, be to diffuse a knowledge of cookery as widely as possible amongst the wives of working men. We may indeed say generally that all hygienic and other measures which tend to maintain or restore health and strength, will tend to restrict the use of alcohol, by preventing the low spirits and feelings of depression, weakness, and incapacity for work, which are such strong temptations to alcoholic indulgence.

Space will not permit me to enter into details on this subject, and in conclusion I shall restate in a few words the opinions regarding the use of alcohol which I think may be legitimately founded upon a knowledge of its physiological action. Alcohol, when taken in moderation as a luxury, may both give pleasure to the person taking it and make him more agreeable to others. When used as a stimulant it may enable a man to accomplish a task which would have been impossible without it. Some persons may use it

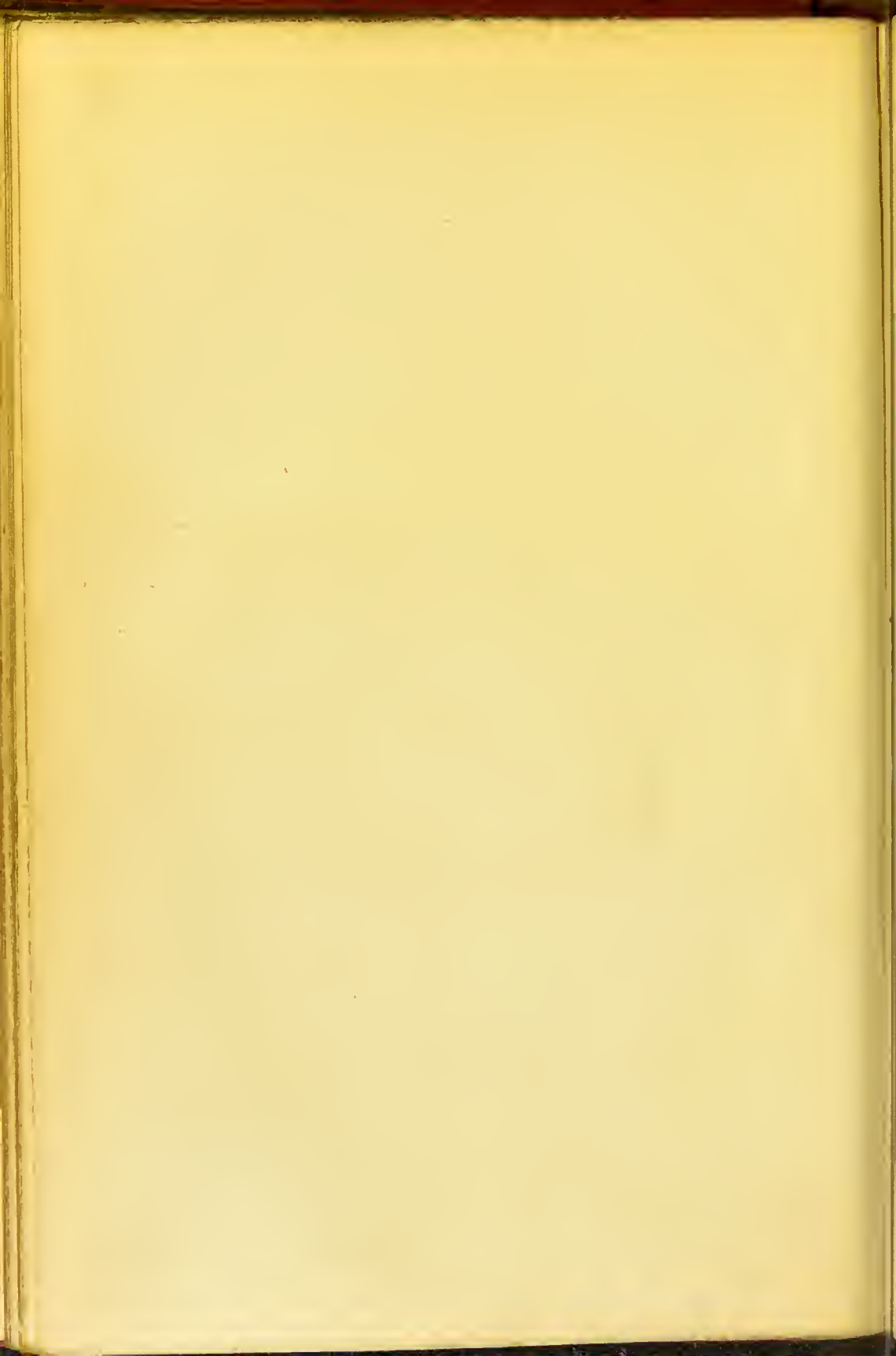
in either way without being the worse for it and without any danger of being tempted to exceed. Others, again, run a fearful risk, and especially those on whom alcohol exerts its stimulant action most readily, and in whom it produces the most agreeable sensations, the most brilliant conversational powers, and the greatest temporary ability for mental work. The more delightful the effect it produces, the greater is the temptation to indulge in it. It is during the course of a disease, during convalescence from it, or when the bodily powers are enfeebled by advancing years, that the beneficial effects of alcohol are most clearly perceived ; and when properly used in these conditions, it is a most valuable remedy. If alcohol were taken only with meals, and its use as an ordinary article of diet restricted to persons suffering from debility or above middle age, it would be strictly in its proper place, and we should hear little about its abuse. If the taste for it is not acquired before middle age, there is little risk of acquiring it afterwards ; and so long as a man is healthy, eating well and sleeping well, he does not need alcohol, and, as a rule, is better without it.



III.

THE MODERATE USE OF ALCOHOL
TRUE TEMPERANCE.

BY ALBERT J. BERNAYS, PH.D.



III.

THE MODERATE USE OF ALCOHOL TRUE TEMPERANCE.

TEMPERANCE as against total abstinence is well worthy of attention at the present time, as legislation in certain directions may be considered an almost foregone conclusion.

We cannot be called, even by courtesy, a temperate people, but I am sure that a great deal of alcoholic intemperance is due to the circumstances under which we live.

What are we to drink? The answer is ready in the mouths of many: WATER. If there is any one thing more astonishing than another, it is the faith with which people consume liquors (water among the rest) of different kinds. I have been at public dinners where the wine has been as bad as possible, and yet have seen it partaken of abundantly although there was but one opinion about the quality. Even so with water. Surely, when water is recommended as the universal panacea, such advocates can have but little know-

ledge of the water-supply to the poor inhabitants and to the labouring classes of our towns and villages! Confining ourselves to London, it will be found that the receptacles for water are unfitted for their purpose; they are improperly glazed, exposed to the emanations from closets and dust-bins, and generally without covers. The supply is insufficient in quantity; on account of the storage, as bad as if it were unfiltered; in summer-time most mawkish from its high temperature, and to a sensitive person about the least inviting of liquids.

Not that the water-supply of London is generally bad: far from it. But the poor, the ill-fed and ill-clad, among whom alcoholic intemperance is so common, have no better provision.

Now, if this can be considered an excuse, it is the fault of the governing body of London that such a state of things should exist in the wealthiest city in the world.

But even in houses where the water-supply is good in quantity and quality, the intermittence occasions much inconvenience and even danger to life from the accumulation of impurities. Well-to-do persons find a difficulty in obtaining cistern-cleaners, and in this respect the water companies might do their clients a service by forming a

brigade whose duty it should be for a moderate sum to cleanse our cisterns as sweeps sweep our chimneys. Still the difficulty as to the temperature of the water meets us, and is with many young men a reason for refusing to drink it.

Supposing we had a perfect spring water, needing no filtration, of low temperature, does water in every respect answer the demands made upon it? For quenching thirst, certainly, and better than any other liquid. But is water food?

One of the favourite arguments against alcohol is, that it is not food. Surely a completely burnt body like water cannot be called food. When a liquid is required to quench thirst, the less of food it contains the better, and that is one reason why water is of all bodies the best adapted to the purpose. Let any one contrast a thin soup with a very nutritious one, and he will at once grasp the meaning.

Obviously then water should be the basis of all drinks, and the quality and the temperature of the water will have much to do with temperance as commonly understood. If alcohol slays its thousands, water has also its victims, and they often the best of the race.

A very small quantity of salt in water will absolutely take away the thirst-quenching quality.

As much salt as we find in good milk, say at the rate of eight grains to the pint, will suffice to render water unfit for drinking. Now our London waters contain less than one-half a grain to the pint. This I mention for a reason.

Water which has gone through some form of preparation, especially through some form of cooking, as in beer, is generally better suited for meals than water itself. For meals, because it may be considered as a matter beyond dispute that it is incorrect to partake of any alcoholic drink without some solid food.

But here we stumble upon one of the many difficulties connected with the practice of temperance, after the concession has been made that moderate alcoholism soothes the sensitiveness of the nervous system.

The pleasant anæsthetic effects of a single glass of good beer, at a meal in which meat or cheese form an important feature, cannot be denied by those who have tasted it. Dr. Carpenter says: "There is another class of cases in which we believe that malt liquors constitute a better medicine than could be administered under any other form; those, namely, in which the stomach labours under a permanent deficiency of digestive powers. . . . There are many

cases in which no form of medical treatment seems able to develop in the stomach that spontaneous power which it has either completely lost, or which it never possessed, and in which the artificial excitement of an alcoholic stimulus affords the only means of procuring digestion of the amount of food which the system really requires."

Unfortunately, there is as much difference between beer and beer as between wine and wine. Some beers quench thirst, others produce it. When the latter result follows, the main object of drinking is lost. We put salt into our food for a purpose, but if we reserve the salt for our drink, we are acting irrationally. From the carelessness in the manufacture of beer, and the allowed employment of sugar as a partial substitute for malt, we arrive at an alcoholic drink containing more chlorides (chlorides of potassium and sodium, salt being a chloride of sodium) than we find in milk, and so very little disguised as to produce thirst. Such a liquor partaken of without food is unsatisfying, as it does not even contain the nitrogenized constituents which are found in a first-class beer made with malt and hops alone, and which sometimes amount to 1.75 per cent.

Now the salt is introduced principally by an inferior well-water, and owing to the varieties of sugar employed. The mixed chlorides from the water and the sugar are far less pleasant to the taste than common salt, and the quantity most objectionable.

Other deteriorations of beer are very common, but they are not, as a rule, of an injurious character.

The intemperance due to beer is very considerable, owing mainly to the quantity imbibed. The amount of money expended by a labouring man upon beer is out of all proportion to his income. A glass of beer, when the day's work is done, could do no possible harm, and especially when accompanied by cheerful conversation. The public-houses have much to answer for, but when we pour out a whole vocabulary of invective, we forget the good which they have done in England.

For it is impossible to dissociate alcoholic temperance from its surroundings. A person well circumstanced in life, who is always deadening his nervous system by alcohol in some form or other, is surely without excuse: he could generally dispense with it. But shall we apply the same measure to others that we mete to

ourselves? The position of the working man is entirely different. He comes home, fretted and overworked, to a house which is nearly everything it ought not to be; and if he has passed middle age, with scarcely any provision on the part of Government except the public-house, the workhouse, and the jail. All places of information are closed against him at the times at which he could visit them; and as for enjoyment, except at his own cost, he knows but little of it. The parks and public gardens are far removed from his haunts, and nothing is brought to his door but the public-house.*

Who shall measure the strength of the safety-valve which the public-house has been to the English Constitution? The lighted and heated room, the cheerful company, the feeling of brotherhood among his fellows, the freedom of debate, and the clashing of opinions, how much have not these had to do with limiting discontent, the wonderful political education of our working men, and their preservation from the worst errors of Socialism?

* It must be distinctly understood that I am speaking of the generation past middle-life. Thank God, religion, education, and common sense have altered most things for the better, and the young have good times in store.

If this be true, there is no sense in a crusade against public-houses as being of necessity against temperance ; it is rather a reason for making them what they should be. Many publicans are equal to any men in the general community, and such might be increased in number by the judicious help of philanthropists.

One great difficulty in the way of temperance in England is due to the prevalence of admixture, and of alcoholic drinks of uncertain strength. When we speak of temperance, we have really no basis to go upon, and for this reason our statistics are so faulty. That which many would call temperance, I should consider intemperance. When I have any work to do, which is the case from Monday till Saturday, I find abstinence from all alcoholic drinks my best guide. But, in winter-time, if I come home after any worry, I should never hesitate to set myself right by taking my favourite and perfect remedy, five or six brandied cherries. In three or four minutes I find myself wonderfully soothed and quieted, and I have never experienced any ill effects. And it is upon this matter of experience that the support of moderate alcoholism should be based. The experience of mankind is better than individual experience, and so for every medical man of distinction who is in

favour of total abstinence, I would find twenty men who would be against it. And if a man is observant of himself and is temperate in all things, he is a better judge of what agrees with him, under ordinary circumstances, than any physician can be.

To return to intemperance. It is a common thing to mix spirits with beer, so that, not satisfied with the per-centage of proof spirit, varying from 7 to 10, gin may be introduced varying from 54 to 80 per cent. At the present time it is probably well known that the publicans have defeated the working of the Adulteration Act by selling spirits as admixtures. Hence there is now the greatest uncertainty as to the alcoholic strength of the various liquors, quite apart from their quality. There may be a variation even greater than the one which I have mentioned. Can it be wondered at that innocent persons are often the worse for liquor, when such variations are permitted by a Legislature which has practically given a monopoly to a trade which threatens the foundations of all morality? I say this, not admitting that it is at all contradictory of a previous statement. Having had much experience under the Adulteration Act, I have no hesitation in stating that this is a serious evil, and, at the same time, one form of intemper-

ance capable of being remedied by legislation. A man who has partaken of a glass of gin only containing 60 per cent. of proof spirit, may feel a demand for a second glass, which will make the difference between soberness and drunkenness. There is more drunkenness where the diluted spirit is sold, than where the strong is regularly dispensed.

Nor is this the only evil. It is not easy to estimate the difference between spirits new and old, and the great injury done by new spirit. So much is this the case that some remedy will probably be provided.

And what shall we say to the atmosphere of the public-house? Not only is it spoilt by a larger number of people than should be allowed to congregate in the space generally allotted, but also by an amount of light injurious to the sight, and, by its combustion, most injurious to the frequenters. If working men were not inured to overcrowding, the mischief would be yet greater.

A great part of these evils is remediable, but they have a distinct bearing upon the intemperance so common around us. Whether the licensing system should be extended upon the present want of principle, can scarcely be a matter of opinion. What is to be thought of a method

which has allowed the opening of places of refreshment (save the mark!) at almost every one of the numerous railway stations in London? If ever a plan for tempting the weak could have been devised by the governors of a Christian people, surely this one has been the most successful! The amount of money passing at these counters, and paid by reputable people, would not be believed if not witnessed. But let any unbiassed person watch for ten minutes, and at many places he will be tired of counting. Now all this has been accomplished since public attention has been called to the subject, and no voice has been exerted to stop it. New vested interests have been created, and people are rendered unwary by alcoholic drink when all their senses are required to keep guard against railway dangers.

Under the licensing system, publicans are not allowed to serve drunken persons. If this were really enforced, one monstrous evil would be done away with. But is it so? Having some knowledge of people from my connection with temperance societies, I can assert that drunkards are often served when in that condition, and are allowed to take spirits home with them. I know the wife of a policeman who complains bitterly that her husband is not only amply provided with

beer when on service, but also brings home more than sufficient for their consumption.

Next to beer, the best form of alcoholic drink is wine. The public owes to Mr. Gladstone many a benefit, and, among his many services, the introduction of wines at a reasonable price. It is true that the public has not availed itself of the benefit to the extent hoped, but it is surely some gain that you can purchase a *vin ordinaire* of very fair quality at one shilling a bottle. When mixed with water it forms a pleasant and wholesome summer-drink, free from danger, and not alcoholic beyond the quality of good bitter-beer.

Unfortunately, many wines are strongly alcoholic. Many of our ports and sherries contain 35 per cent. of proof spirit and more. Now as strong alcoholic draughts are injurious, and as the strength of wines is but little known, it is always safest to mix the wines with water, or at least to make water an integral part of our meal. Would that our wine-merchants gave us with the invoice the alcoholic strength of the wine.

With the use of wine a more moderate allowance of food should suffice; if it do not, then the wine is in excess. About this fact there can be no doubt: moderate eating and moderate drinking should go together. A temperate man

is moderate in all things. If he were in perfect health, his appetite would never require subsidizing, and he would reject even wine as dulling his sensations. But the demands of a town-life on the nervous system, in the mere struggle for existence, are sufficient reasons for recommending the moderate use of wine.

At the present day it is a common thing to meet a friend in very bad health, and you ask him the cause. Often it is owing to some experiment in teetotalism. Such experiments are very injurious, and should not be attempted by people who have passed their fortieth year. I am not speaking of the intemperate; for such, even if death ensues, there is nothing for it but total abstinence. But when we are told that it is better to die than to take an alcoholic drink, and that people should disobey their medical advisers rather than be persuaded to take wine or brandy, then I think it is time that we should protest.

Once, when, in my innocence, I imagined I was forwarding the temperance movement in giving a gratuitous lecture on alcohol, I was asked by an ardent teetotaler whether I believed that the miraculous wine at the feast of Cana contained alcohol? I said, "Yes;" then "You are a liar,"

was the immediate reply given in public. This settled the question, and also the respective temperance of the persons in question. I should not have mentioned the anecdote did I not believe it to be a matter of necessity at the present day to stand up for principles. And the principle I contend for is moderation rather than abstinence.

With reference to the sale of wines, whilst I myself give the preference to the wine-merchant, and consider it to be of equal importance to know the quality of the wine I drink as of the chemicals I employ in my profession, I observe that the grocers have come in for more than their share of abuse, because they have combined the wine-trade with their own special business. Now this is hard and undeserved. The public has now an opportunity, never before afforded, of purchasing the wines of well-known merchants. In the middle class it is well known that female servants are constantly sent upon errands, and to the public-house if necessary. Surely the public-house is no proper place for them, and therefore it is an advantage to be able to send to a grocer. As for the state of the wine, it is not for me to speak favourably if the wine is kept in the shop exposed to daily alternations

of heat and cold and, indeed, to the very conditions for spoiling. But this is not generally the case. Some grocers drive a brisk trade, and are able to furnish wines at a reasonable price, as well as superior wines of a quality not to be had of the publican and with difficulty of the wine-merchant. This is owing to the enterprise of such firms as those of Messrs. Williams, Messrs. Gilbey, etc., etc. If any alteration be made in the license of grocers, it should be in the direction of compulsory statement of alcoholic strength of wines and a removal of the permission to sell spirits. A single bottle of spirits is even now purchaseable of the wine-merchant as well as a single bottle of wine, thanks to the competition of the grocer.

But that the blame of increased drunkenness, or of offering facilities for drunkenness, rests with the grocer, is devoid of proof. From my own observation there is no increase of drunkenness in the working classes of London. Considering the population, the inhabitants of London are the best people of our great cities, and contrast very favourably as to conduct with those of others. And yet they labour under great disadvantages compared with the town-residents of France and Germany. We have no pleasant gardens scattered

through the towns with places for refreshment where coffee and tea can be had. Along the Embankments not a single *café*, and until very recently not even seats! Many squares, of no use to the surrounding houses, but which would be gardens of delight and very fairy-lands to our poor, are closed as against an enemy. Our Sundays are made as dull as possible, and, with a Pharisaism of the most open character, the museums are closed while the public-houses are open! It is a wonder that our people are what they are. Had it not been for Wesley and Whitfield, for Simeon and Newton, and others, we should have had revolution in the last century, instead of hundreds of thousands of contented citizens. And were it not for the outlets afforded by the United States and the Colonies, home-discontent would have attained to a dangerous height.

Intemperance in drink is very bad, but it is only one form of transgression. Whatever can be done by legislation should be done at once. But it should be no attempt at total repression, but rather in the direction of raising the general condition of the people. The children in our schools should be taught that the Kingdom of God is neither in meats nor in drinks; that tem-

perance does not merely apply to drink, and should proceed from right principles; in fine, that temperance is better than abstinence, and that its influence is far greater.



IV.

ADVANTAGES AND DISADVANTAGES
OF ALCOHOL.

BY SIR WILLIAM W. GULL, BART., M.D., F.R.C.P.,
D.C.L., F.R.S.



IV.

ADVANTAGES AND DISADVANTAGES OF ALCOHOL.

To the Editor of THE CONTEMPORARY REVIEW.

SIR,—

In reply to your request that I should write a paper for your REVIEW on the use of Alcohol, I have to say that I think my opinions have been fully expressed in my evidence upon the subject, given before the Select Committee of the House of Lords. I adhere to those opinions, of which my friend Dr. Bucknill has made the following précis, representing them correctly.

I am, &c.

WILLIAM W. GULL.

I PRIZE alcohol and wine as medicines; we can hardly do without them altogether. There have been changes in medical practice in the amount of alcohol used. Forty years ago it was moderate. Then came the change, due I think to the School of King's College, headed by Dr. Todd, which was based on the theory that cases of acute disease were almost universally weak and antiphlogistic, and therefore to be treated with brandy. For the past twenty years

there has again been a great change, and we believe now that diseases run for the most part a physiological course, and that alcohol has but a subordinate value, which is due chiefly to its action on the nervous system as a sedative. Under this view many diseases are now allowed to run their course without alcohol; but if we find a patient very delirious or exhausted we give him alcohol, not as formerly with a view of curing the disease, but with that of calming the nervous system during the course of the disease. There are cases such as a high-pulse fever, in which what are called phlogistic symptoms would be moderated by alcohol; and it was Dr. Todd's merit to point out that the distinction between phlogistic and antiphlogistic has no existence.

Fever can be treated without alcohol. In young patients of sound constitutions it was my practice at Guy's Hospital to do so, that my students should be able to see the course of the disease. I have cured many cases of typhus in young subjects under twenty-five with camomile tea and light diet, and the practice was quite safe in these cases. I think the error is still prevalent that alcohol cures the disease, whereas the disease runs its physiological course. The

advantage of alcohol is in its effect upon the nervous system, rendering the patient more indifferent to the processes going on. I am disposed, however, to believe that although we could not do without alcohol as a drug, it is still overprescribed. Under the shock of an injury or an operation the nervous system has to be deadened, and alcohol is the best agent for that, acting as a sedative as one would use opium. Probably it acts through the sympathetic nerves, but I could not give the rationale. That would be a very complicated question. I do not know how alcohol acts upon the body altogether—I do not think it is known; but in disease we use it very much as a sedative. There are cases in which it would be dangerous to do without it, as the delirium of typhoid, in which the patient would wear himself out and die unless soothed by alcohol so that he goes to sleep. If opium were used instead, the result would probably be fatal. In such cases alcohol is the best sedative we possess.

As regards the daily use of alcohol as a drug, I think there are conditions of the system, under fatigue and exhaustion, where it might be useful, where the nervous system might be deadened, if I may say so, or that alteration made in it which

was requisite. But though the use of alcohol in moderation may be beneficial, I very much doubt whether there are not some kinds of food which might very well take its place. If I am myself fatigued with overwork, I eat raisins instead of taking wine. Cases of feeble digestion you may deal with by light and varied food, but still I think wine is useful—a little wine and with strict limit—as a medicine for temporary use. For young people I should not consider it necessary, but one must consider alcohol in respect of age. One of the Greek poets writes, “There is an equal use in wine and fire to the dwellers upon earth,”* and I think he is right if you take the whole dwellers upon earth. In the northern regions you want more stimulant and fire, in the south less; and again, more as age increases and vitality diminishes. Good food will supply all the wants of the system up to the middle period of life. In old age or disease you may often want some artificial stimulus, or something to act upon the system as we use fire.

In advising a young man of sound health as to whether he ought to give up alcohol, I should consider his calling. I am not sure that I should not advise an out-of-door man, doing a good deal

* Οἶνος γὰρ πῦρ ἴσον ἐπιχθονίοισιν ὄνειρα.—*Panyasis.*

of work, a carter for instance, to take some beer, as a good form of food, containing sugar and vegetable extract and very little alcohol, but a very small piece of beefsteak would make up the materials. And if the man had a good strong digestion he could do without his beer. Some stomachs have more power than others to consume common food. I do not think we should be prepared to say that, speaking of the labouring classes, everybody could go without beer, as a food of a light kind.

As for intellectual work I should join issue at once with those who say that it cannot be half so well done without wine or alcohol. By alcohol I hold that you may quicken the operations of the intellect, but do not improve them. Alcohol makes the thoughts run quicker for a time, but they are not very good thoughts. A very large number of people fall into the error every day of believing that strong wine and stimulants give strength. I am persuaded that nothing better could be done than that lecturers should go about the country instructing the people upon the disadvantages of alcohol as it is daily used. People will not listen to the temperance societies because they carry their theories too far. I do not think that you can

start with the idea that there is no use in alcohol and no good in wine.

7 The constant use of alcohol, even in moderate measure, may injure the nerve tissues, and be deleterious to health; and one of the commonest things in society is that people are injured by drink without being drunkards. It goes on so quietly that it is difficult to observe, even though it leads to degeneration of the tissues, and spoils the health and the intellect. Short of drunkenness, I should say from my experience that alcohol is the most destructive agent we are aware of in this country. There is an affiliation of disorders arising from excess of drink, beginning at the liver and the blood, and proceeding to the lungs, heart, brain, and kidneys. 7 I think that is about the order. The stomach will often go on a long time. A person who carries a great deal of drink and does not get drunk may be even more damaged than a man who does get drunk, because he may be able to pursue his system of drinking for a longer time. When a man who has been in the habit of drinking largely has some disease, I should fearlessly take alcohol away from him altogether. In habitual drunkards you can stop the supply of alcohol at once without injury.

If you are taking poison into the blood, I do not see the advantage of diminishing the degrees of it day by day. Neither should I recommend any tonic or drink by which a drunkard might gradually accustom himself to abstinence from alcohol. I should recommend nothing beyond good food, which might not at first supply the craving, but would ultimately overcome it, and Liebig's Extract of Meat is one of the best stimulants in such cases. A habitual drunkard may be so spoiled and generally incurable that really one can do nothing with the man; but assuming him to be in a fair state to be treated, I would still not give him tonics.

With regard to the subject of restraint, there comes a time not only in drinking but in all other habits when habit becomes second nature, and this habit, as it is with taking other poisons, —opium, for example,—becomes an overwhelming impulse; and you can no more trust a drunkard than you can an opium-eater or any other man whose habit has become strong. I see no objection to allow a form of contract by which a man might say, "I agree to be confined for a certain time under care and restraint for the purpose of effecting my cure." It stands to common sense that if a man were willing to

give up his drinking habits one would be very glad to close with him and keep him from them. Then comes the question of the houses. It would be a very much larger question to let his friends put him in. I should be very careful how I allowed a man's friends to interfere with his freedom when he was sober. The restraint would be the difficulty. I could understand the desirability of having those places, and the desirability of encouraging a drunkard to enter them, but when he recovers from his drunkenness, which he would do in the course of a few days, then I should be in a difficulty how I could enforce, and how long I was to enforce, those conditions. The question arises how far you would allow him to change his mind, and another great difficulty would be as to the number of months in which a drunkard's tissues are remade into sobriety. Any evidence on that point must be very theoretical. I think that when any man has recovered from his drunken bout he is as likely to be morally good on that day as he would be after the next six months—in fact, perhaps better, because at the end of six months he would have forgotten the difficulty he had been in. I think a man might be as likely to behave well after the end of a week

or a fortnight as he would at the end of six months. A man who has had a drunken bout will often remain sober for two months or more, so that I am not sure that if you shut these people up for any length of time you would gain much. I think that all evidence about terms of detention for twelve or eighteen months would be entirely theoretical. I believe in hereditary tendency, not to drunkenness *per se*, but to that in which drunkenness is included. If this question were carefully studied, it would be found that there are people mentally defective in many ways, who, however, by good education and reasonable punishment at an early period, might be trained to good habits.

I would say that the term dipsomania is an euphonious expression for incorrigible drunkenness. The word is not admitted in science. It would be properly applied to rare diseases in which there is uncontrollable thirst, not for alcohol but for mere fluids. You may distinguish between insanity and drunkenness by this: a man who is drunk gets sober when the drink is eliminated, but the insane man does not recover by such a process. I do not think that a court of law in the administration of punishment would find it very difficult to distinguish between

the two. You cannot, however, make a man sane by punishment, but I feel reasonably sure you can make a man sober by punishment. I think that unless drunkards are made criminals, and the force of the law is brought to bear upon them, there is no way of dealing with them. But I would not advocate making them criminals for the mere silent indulgence of drinking, unless it were accompanied by some injurious effects on society, nor unless a man were injurious to others. But cannot you catch the habitual drunkard early, before he has become an incorrigible habitual drunkard, or even in the beginning, in his first drunkenness, when you are more likely to do him good? Society might make it appear more or less distinctly by its vote or feeling that drunkenness is a fault against society. If a man is found drunk I would publish his name in the district where he lived, for public reprobation; but I know that society would not do that, and I see no other way of dealing with it. Society is like a pyramid, and I could deal with drunkenness if you would let me cut my section near the apex; but how deal with it if the section be cut near the base, where the area is so enormous? I think you cannot do it by legislation, but I think it can be done by the

better instruction of the people, by providing better houses, better means of occupation, and better amusement, and by fostering better public sentiment.

I think the Committee must consider, in all the conclusions they come to, the question for whom this inquiry is made, and the section of society to be legislated for. That is to say, is it for the whole area of society, or is it for a few prominent cases where a great deal of public scandal and harm follow? No doubt legislation is chiefly needed for the lowest sections, because the upper sections of society can take care of themselves.

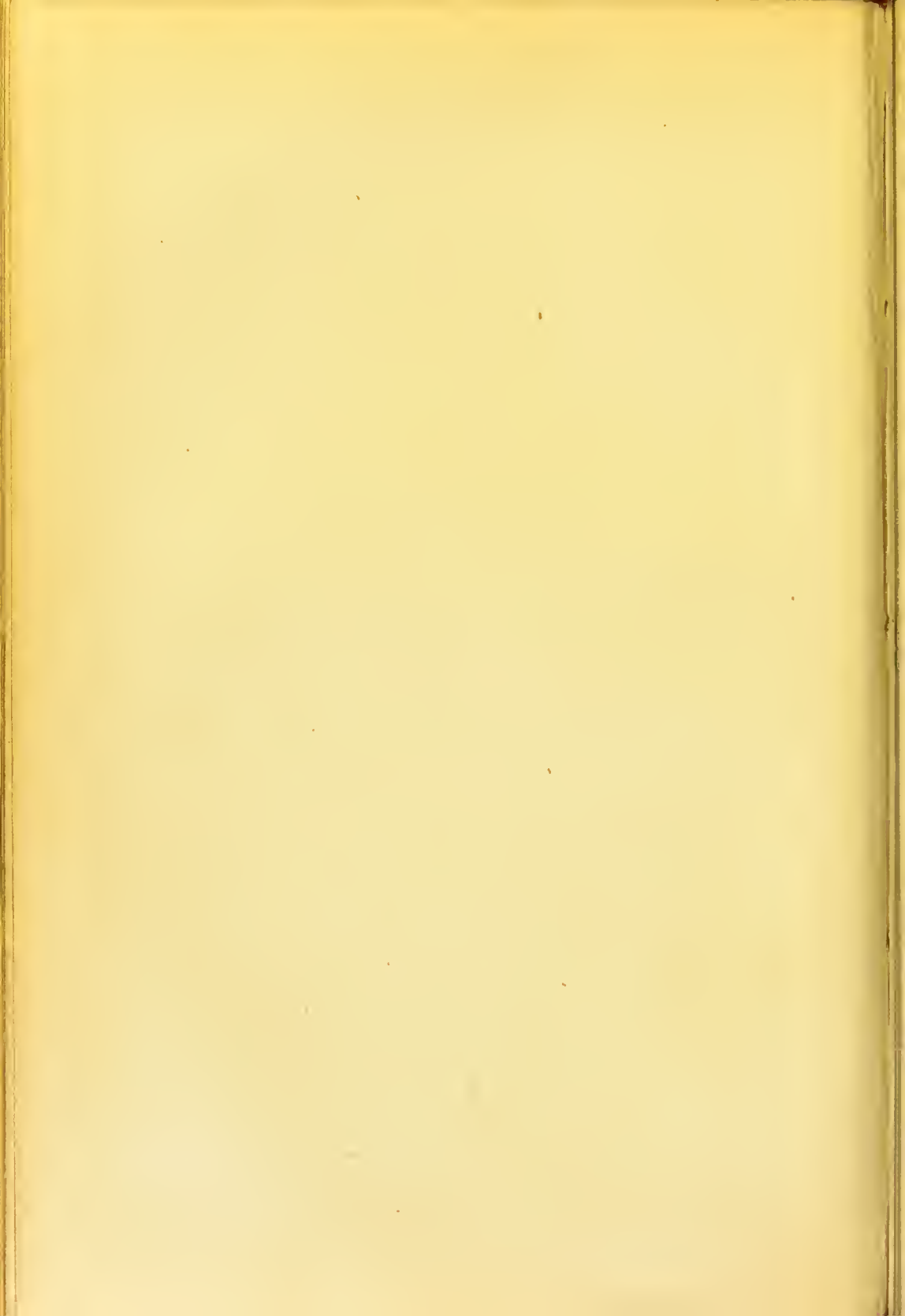
Considerations as to what is practicable, and what is not practicable, must vary with this question, because it would be difficult to apply a law to that lower area of society where the evil is so very widespread. You could shut up these people if you had but few of them, but if you had thousands of them, it would come to be a very difficult matter. Then, I think, another consideration the Committee must have before them at all times is, whether the Committee is dealing with a *disease* or a *crime*. I confess that I think that although a drunkard is the subject of disease, in a certain sense when

he is drunk, still when he becomes sober he becomes criminal if he falls back into his drunkenness. With the exception of suicide, nothing a man does against his own health is a crime. The question is, whether a man destroying himself by drink should be allowed to go so far as that without punishment. As for riotous drunkards, who have been convicted a hundred and fifty times, I should have no hesitation in treating them as criminals.

V.

THE UTILITY OF ALCOHOL IN HEALTH
AND IN DISEASE.

BY THE LATE CHARLES MURCHISON, M.D., F.R.C.P.,
LL.D., F.R.S.



*THE UTILITY OF ALCOHOL IN HEALTH AND
IN DISEASE.*

ALTHOUGH the majority of adults in this country still consume a daily allowance of alcohol in one form or another, there has perhaps never been a time in which there have existed in the medical profession, and to some extent out of it, such strong and general doubts as to the advantage of the habit. Not a few—very often, it is true, they who have found that they cannot take alcoholic drinks in any shape themselves without in some way suffering—decry their use altogether; while others, not yet perhaps having experienced any obvious injury from them, are unwilling to believe that there can be any harm in a custom at once so time-honoured and pleasant.

Having been one of the first (in 1860) to raise my voice against the fashion, prevalent about twenty years back, of treating all acute diseases on principle with large quantities of alcohol, and

having since then had unusual facilities of observing the effects of alcohol in inducing serious local diseases and in deranging the general health, the subject is one to which I have devoted considerable attention, and on which I think that I have some right to express an opinion.

It appears to me that, in the discussions which have taken place respecting the advantages or disadvantages of alcoholic drinks, one matter has been too much lost sight of, viz., that all persons are not constituted alike. Indeed, the constitutions of no two persons are identical; and hence, as regards both alcohol and other things, each constitution demands a treatment suitable to itself. Still, speaking generally, it may be said that, as regards their alcoholic capabilities, healthy persons may be divided into three classes.

1. There are some who during all their lives drink daily a moderate, or even a considerable quantity of alcohol, and are to all appearances none the worse. They die perhaps at a good old age, of ailments with which alcohol can in no way be connected. It is astonishing, indeed, what enormous quantities of alcoholic drinks are habitually consumed over a long series of

years by some few persons, without the health apparently in any way suffering. These cases are sometimes appealed to as proofs of the harmlessness of alcohol. But for one person whose constitution enables him thus to live to old age, hundreds succumb early to diseases which are avowedly the result of alcoholic poisoning. Medical experience amply endorses the wisdom of the directors of insurance offices, who accept the lives of publicans only at a greatly increased premium, or decline them altogether. The ability to consume alcohol in any quantity depends much upon the circumstances in which a man is placed. He who leads a country life, and takes active exercise in the open air, can consume without suffering an amount which would be positively injurious to him were he a sedentary student, or a professional man in town. It is the altered habits of the present generation that account in great measure for their being less tolerant of alcohol than their forefathers.

2. But secondly, there are persons who habitually consume what is considered a moderate quantity of alcohol, and perhaps at the time feel all the better for it. At length, however, disease overtakes them, and then it is forgotten that the

brittle artery, the softened heart, the diseased liver, or the gouty kidney, or the other evidences of premature decay, which for years have been slowly and insidiously advancing, and which at length render life a burden or terminate it altogether, might have been postponed, or perhaps might never have occurred, had it not been for the daily dose of alcohol, which induced an abnormal chemistry of the tissues and the circulation of an impure blood. My experience has led me to the conclusion that alcohol, taken in what is usually regarded as moderation, is more or less directly the cause of a large number of the ailments which in this country render life miserable, and bring it to an early close.

3. Lastly, to a third and by no means a small class of persons, alcohol, even in small quantities, is an unmistakable poison. One or two glasses of sherry or of champagne will produce lassitude, achings in the limbs, frontal headache, inaptitude for bodily or mental work, want of sleep, and other distressing symptoms. The man who thus suffers, fancying that he is weak, has recourse to a larger quantity of the universal restorer, but finds that he is worse; then he goes to his medical adviser, who perhaps tells him to substitute brandy or whiskey for the wine, from which counsel he

often infers that whiskey is good for his complaint, instead of its being, as his medical friend intended, the lesser of two necessary evils. He consults one doctor after another, and will consume any amount of drugs in the vain effort to alleviate his sufferings, but he cannot be prevailed upon to do what alone is necessary, namely, to give up his daily dose of poison, because, forsooth, he is unwilling to be singular, or because he fears that he will become too weak in consequence of his omitting to take the daily stimulus, which, in truth, is undermining his health, and is the real cause of his weakness. This intolerance of alcohol very often runs in families; like gout, with which it is often associated, it may be inherited; but not unfrequently it appears to be due to a state of the constitution induced by various diseases, such as severe fevers, etc.

With regard to this last class of persons there can be no doubt in my mind that alcohol is an unmitigated evil, and that total abstinence is the best rule. The real difficulty is in deciding as to the advantage of alcohol to individuals belonging to the first two classes.

Now, in the first place, although there are no statistics, and probably never will be, to guide us in deciding whether the daily use of alcohol in

moderation conduces to longevity, or to a healthy and vigorous performance of the bodily and mental functions in any class of persons, I believe that there is little ground, either scientific or practical, for the prevalent belief that, as regards bodily and mental working power, there is advantage in its use to those who are in the enjoyment of good or average health. Without entering into the still vexed question as to the mode of action of alcohol,—whether it be a food or merely a stimulant of the heart's action,—so far as my observation and experience go, in a man who enjoys average health, who eats well and sleeps well, the judgment is clearer and the mental capacity greater when he takes no alcohol, than when he takes even a small quantity; and with regard to bodily work, although alcohol may enable him for a time to exert himself beyond his proper strength, the subsequent reaction requires a repetition of the stimulus, and ere long the frequent repetition of the stimulus causes the health to break down. The cases in which small quantities of alcohol are constantly taken with the object of enabling a man to get through his daily toil are among the most distressing examples of alcoholism with which the medical man is brought in contact. The argument that the Mohammedan inhabitants

of Eastern countries who drink no alcohol are inferior, on this account, in bodily and mental vigour, to Europeans who for the most part do consume alcohol, appears to me to be of little value, in consideration of the many other conditions of climate, race, and habits, to which the difference may be traced. Eastern nations are no doubt liable to maladies resulting from the conditions under which they live, from which Englishmen and Europeans are wholly or comparatively exempt ; but it is rare to find in them gout, or the constitutional state which induces not only gout but many of the most formidable disorders of vital organs and degenerations of tissue with which Europeans are afflicted. Although it may be impossible to adduce statistics either for or against the moderate use of alcohol, the physician who carefully watches the early beginnings of disease in individuals—the dyspepsia, for instance, which is often the first link—cannot fail, I think, to admit that these are due in very many instances to alcohol in some form or other, which, though taken in what most persons would regard as moderation, yet has deranged the primary or secondary digestion, or has in some way disordered the chemistry of nutrition or of elimination.

It follows then that if alcohol be not necessary

to enable a healthy man to accomplish his daily work, and if we cannot tell, until it be too late, to which of the first two classes of persons already referred to he belongs, or whether the daily use of alcohol may not have the effect of slowly undermining his general health, the question which each person has to decide for himself is whether, in order to gratify the pleasures of the palate and conform to the usages of society, he will encounter the risk. The risk, it is true, may in many instances be slight, and many persons will no doubt continue to encounter it rather than forego the pleasure ; but the healthy man who wishes to live long, and to continue enjoying good health, without which long life would not be desirable, ought, I believe, to abstain from the *habitual* use of alcohol, although a glass or two of wine, or some of Dr. Bernays' favourite "brandied cherries," taken *occasionally*, may do him no harm, and may at times, under the circumstances to be presently mentioned, be of service.

What then are the conditions of the animal economy in which alcohol may be of positive use? That there are such conditions I believe cannot be denied by any one who has honestly studied the subject ; but they are not the conditions of perfect health. It is especially when the circulation is

weak or sluggish that a daily allowance of alcohol may do real good. Thus—

1. Alcohol is useful in the course of most acute diseases, when the organs of circulation begin to fail, as they are apt to do. A moderate quantity usually suffices. The large quantities—*e.g.*, one or two bottles of brandy in twenty-four hours—still sometimes administered, may do harm by inducing congestion of various internal organs.

2. In convalescence from acute diseases, or from other weakening ailments, when the circulation remains feeble and the temperature is often sub-normal, alcohol is also useful in promoting the circulation and assisting digestion.

3. In persons of advanced life the circulation is also often feeble, and a moderate allowance of alcohol often appears to be beneficial.

4. All other conditions of the system marked by weakness of the muscular wall of the heart, whether permanent or transient, are usually benefited by alcohol.

To all persons under some of the circumstances now mentioned alcohol may be useful for a time, even although its habitual use may do harm. But one rule ought never to be forgotten—*viz.*, that for whatever purpose alcohol be given, it ought never to be taken on an empty stomach.

It is the prevalent practice of "nipping," or of taking stimulants in the intervals of meals, which is most injurious to health.

In conclusion, I may sum up my opinions on the utility of alcohol to man in health and in disease in these few words:—

7. 1. A man who is in good health does not require it, and is probably better without it. Its occasional use will do him no harm; its habitual use, even in moderation, may and often does induce disease gradually.

2. There are a large number of persons in modern society to whom alcohol, even in moderate quantity, is a positive poison.

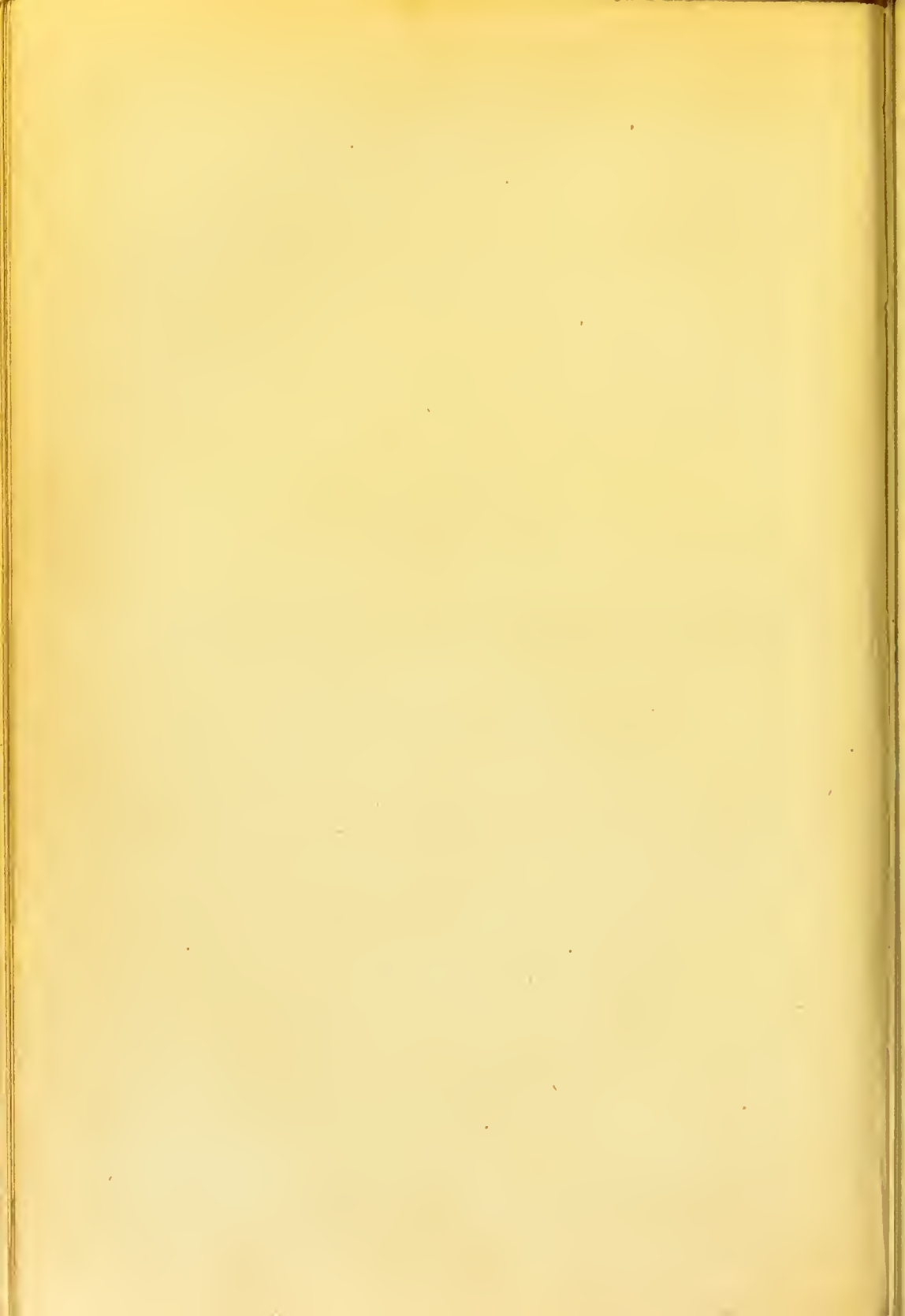
3. In all conditions of the system characterized by weakness of the circulation the daily use of a small quantity of alcohol is likely to be beneficial, at all events for a time.

Alcohol, were its use restricted in accordance with these views, would, in my opinion, be productive of much good; but when taken in accordance with the fashion and opinions which are prevalent, it is to be feared that the good which it confers is incalculably surpassed by the evil which it inflicts upon the human race.

VI.

ALCOHOL AND INDIVIDUALITY; OR, WHY
DID HE BECOME A DRUNKARD?

By WALTER MOXON, M.D., F.R.C.P.



VI.

ALCOHOL AND INDIVIDUALITY; OR, WHY DID HE BECOME A DRUNKARD?

THERE is one aspect of the Alcohol Question which, although it is not purely medical, yet is brought strongly before the mind in reflecting upon those mental faults and sufferings for which medical advice is often sought. The aspect I refer to is that which regards the various powers of alcohol over the several faculties or sources of ability which constitute the mind of an individual person, the right balance of which faculties composes such person's mental health. By the power which alcohol exerts over men's enterprise, readiness of resource, and perseverance, what is its influence for or against their working power?

No question requires more circumspect and patient consideration, and yet no question is more nearly hopelessly lost in the conflict of narrow, hasty, violent opinions, because so many have their welfare and happiness blighted by the abuse of alcohol that neither they nor those around them

are able to judge impartially as to reasons for its moderate use.

What influence has alcohol on the composition or development of mind and texture which shall best enable a man to hold his place in the struggle for existence?—a struggle which in our high civilization has become removed into artificial conditions, so that a man must somehow find increasing vigour as social life makes greater demands upon him, whilst nature's simple provisions for his self-maintenance are more or less obviously following the example of his teeth, and his teeth are obviously growing few and bad before their time.

Struggle for existence! as perhaps it was in Mr. Darwin's world of advancing beasts and developing vegetables. But now the plan is so turned about by the arrival of man on the scene, and by his civilization, that you cannot watch even Darwin and Huxley themselves without seeing that the struggle they and other good men wage is no struggle for existence, but a struggle against mere existence. The struggle for existence is brutal life. A struggle to do something more than exist is the sign of human life—the mission of the human soul. What is the use of alcohol in such a struggle? The question is a wide one. It

might lead us to inquire what that is which men want to obtain beyond mere existence. Watching some eminent teachers you might suppose it to be a very detailed knowledge of the common frog. But men are human because they look upwards and to the future, not downwards and to the past. And Darwin and Huxley, and even Haeckel, will in time learn that over-scrutinizing insufficient evidence does not make it more complete.

The question what alcohol can do in the human struggle against mere existence cannot be settled by giving alcohol to dogs or rabbits, nor even by observing the effects of alcohol on several soldiers doing so many foot-pounds of work *per diem*. For, although soldiers struggle against existence in more ways than one, yet Dr. Parkes's test of the usefulness of alcohol in them only took into consideration their muscular strength. But alcohol owes not its power over man to its effects on his muscles. It affects the whole man—his whole self—all he can do and say. And not only so, but all that his bodily nature does in secret within him. So that along a continuity of processes, from the beating of a gentleman's heart up to his most perfectly inspired bow, or his most eloquent speech, this agent plays upon his nervous system. Yet many talk as if alcohol was a thing of very simple

powers, and its use a mere question whether it feeds people? whether it is burnt in the system or no? what is the nutritious power of a Scotchman's whiskey as compared with his porridge?

The people who take this simple view are called Physiologists.

They hold opinions rendered confident by science. Their views, however, ignore such small points as do not come within their science. Just as to botanists it makes no difference whether a strawberry is a British Queen, or a Doctor Hogg, or a common wild one under a hedge, all are alike *Fragaria vesca*, so the physiologist makes no difference between gentle and simple. To a physiologist a Queen's Counsel and a potman are alike. He will dissect and decompose the one as easily as the other, and into the same fibrin, albumen, neurin, hæmoglobulin, etc., and tell both their oxydations up in foot-pounds. A trenchantly simple levelling view, but with the disadvantage of overlooking differences which, however they evade the scalpel and the retort of physiology, are the very foundation of the order and stability of social life.

The great question of the use of alcohol which I wish to examine is the power it may have over those factors of difference between Queen's Coun-

sel and potman which distinguish men from men, thus going outside the range of physiology to enter the region of truly humane interest and import.

Lest I should seem to raise a subtle and unpractical point, let me quote a few lines from clinical medicine, a science which is obliged to extend its range beyond the limits of physiology. Dr. Stokes, one of our best authorities on Fever, says :—

“In private practice, we often find that stimulation cannot be carried on so boldly as in hospital ; and this appears to be connected with the previous habits of the patient, not in the way of intemperance in the use of wine, but in that of over-exercise of the brain. Men engaged in anxious callings, or in intense mental exertion, are bad subjects in fever, and bear the stimulating treatment imperfectly.”

I quote this because experience has led me to the same conclusion,—that is, in general, that the effect of alcohol during febrile illness differs much in different classes of people. But whilst we calmly consider such a question, it is to others rendered a theme of insufferable repulsion by the glaring excesses of its more violent and obvious effects in drunkards. And the reaction from the realities of hideous intoxication gives rise in the minds of excellent people to a recoil into a deli-

berately extreme opposition to an agent capable of such appalling mischief.

Consider for a moment either extreme. Take a case. A gentleman came before me to know what further he might do to have health. His conscience so far was well in his favour. Two years before he had consulted a great authority, and had been told to live on fish and whole-meal bread, and to drink water. He had done so ever since ; how observantly, was written in his white face. He looked a compound of whole-meal, fish, and water. What more could he do, now that he was much weaker,—scarcely able to do his day's work. He was evading opportunities of usefulness, and living in dread through his sense of prostration, all this in the patient endeavour to feel strong by overmuch self-denial. But the other extreme is better known and justly dreaded. The man who would feel strong by overmuch self-indulgence, and has become subject to intoxication mania, he is never very far from you. Try arguments on him, if you wish to set up in your mind a refined ideal of tantalizing hopelessness. None so reasonable when sober, so explanatory, so promising ; such a nice man to talk to. But meet him when on the drink, and then try your influence. The beloved wife may join her hands imploringly ; his

pallid, starving children may look timidly up in his face: he goes by to ruin himself and all, as you go through cobwebs on a fresh September morning.

Either of these extremes is in its own way baneful, though in different degrees. The drunkard revolts every feeling of humanity in the most positive manner. He who lives under terror of indulgence lives short of full life, and of the good he might be to others. His co-inmates at home could show how his self-involved bearing, if it did himself no harm, yet frets into pettiness half the life of those he lives with.

What would not one do or give to set right these forms of apparently wanton error?—blasting, on the one hand, or stunting or warping, on the other, the manhood of men.

Good people are ready to prove by their deeds how much they will do to remedy the extreme best known to them. They try and save the drunkard by forming Bands of Hope or of Good Templars, vowing sternly to forego all the pleasures and profit, if any, that are got from alcoholic stimulants, hoping thus to arrest the vice of drunkenness. Such self-denial from such a motive is worthy of all honour. And all men bless them, and wish them the success they fully deserve.

But the truth must be said that their success is deplorably small as estimated by the number of drunkards they reclaim. Experienced men say they have never known a drunkard permanently reclaimed. The teetotal organizations show considerable apparent achievement when they turn to prevent the use of liquor by those who have shown no tendency to abuse it.

But unhappily there is a drawback to this kind of gain, to illustrate which I will give one more case. A poor honest working cooper in the Borough, who had a wife and three children, had injured his ankle with one of his tools. The wound festered, and his constitution became involved in some degree of fever. He was pale, under-nourished, and tremulous, and we judged it absolutely necessary that he should at once have wine or brandy to carry him on through his illness. But he refused to touch anything containing alcohol: he had signed the pledge. Wine was sent disguised as medicine. He found it out, and then would take no medicine. He died in a few days. I am as sure as one can be sure of any such thing that he died because he would not have the help stimulants would have given him. I could not but respect the poor man, and shall never forget him. He showed character worthy a better end. I

think I have never forgiven the teetotalers the loss of that fine fellow. It induced me to invent the term "intemperate abstinence." The fact is that we have to recognize in a part of the population a disposition to extremes of which either is intemperate. The common rough rule has been to let these extremes take care of each other. And at first glance it might seem that this is not a bad plan. But it is a little unfair if the kind of people who suffer from teetotal influence are most liable to fall under such influence, whilst they least need the protection it affords.

In short, I believe that to a large extent teetotalism lays firmest hold on those who are least likely ever to become drunkards, and are most likely to want at times the medicinal use of alcohol—sensitive, good-natured people, of weak constitution, to whom the Sacred Ecclesiast directed his strange-sounding but needful advice, "Be not righteous over-much, neither make thyself over-wise : why shouldst thou destroy thyself?" He to whom that advice seems necessarily ironical as directed to human beings does not know the nature and weaknesses of many of his fellows. For the place of a good conscience is easily taken by a kind of triple monster, one side of which is always barking, *Thou shalt be clever* ; another, *Thou shalt be good-*

looking; the third, *Thou shalt be without fault*:—perhaps the three beasts which drove Dante back from his way up the hill. And any one entirely under the power of either, and still more of all of them (though as to the first and third one is apt to silence the other), such an one needs help almost as badly as a sot needs help, whilst he is too ready to grasp at any quackery to obtain it.

To meet the evils of intemperance in a few by stern refusal to allow wine to any is like the Stoic plan of striving by repression of every sentiment and feeling of the mind to take away the annoyance of occasional turbulent emotion, or like Mohammed's plan of making his followers honest by disallowing the profits of trade. Some limitation of per-centage of dividends might perhaps save Christians from each other. But all extreme rules of repression must fail because people won't endure rules which rob individual character of its elasticity and social life of its charm.

Teetotalizing A, the good man, to save B, the sot, is throwing good after bad. The sot is not worth it. He may be deserving of the pity often bestowed on him: all crime has its pitiful side. But as to saving him! Before committing yourself to a life-long course with such a quest it would be well to ask an oracle. The right oracle would

be Morbid Anatomy. That oracular science claims the sot. When the sot has descended through his chosen course of imbecility, or dropsy, to the dead-house, Morbid Anatomy is ready to receive him—knows him well. At the *post-mortem* she would say, “Liver hard and nodulated. Brain dense and small; its covering thick.” And if you would listen to her unattractive but interesting tale, she would trace throughout the sot’s body a series of changes which leave unaltered no part of him worth speaking of. She would tell you that the once delicate, filmy texture which, when he was young, had surrounded like a pure atmosphere every fibre and tube of his mechanism, making him lithe and supple, has now become rather a dense fog than a pure atmosphere:—dense stuff, which, instead of lubricating, has closed in upon and crushed out of existence more and more of the fibres and tubes, especially in the brain and liver: whence the imbecility and the dropsy.

And Morbid Anatomy would give evidence that such was the state of the drunkard long before he died. So that in vain you get him to sign the pledge. He signs too easily, because his brain is shrunken, and therefore he cannot reflect. And he breaks his pledge immediately, because his brain is shrunken and his membranes thick, and there-

fore he has no continuity of purpose and will. The lunatic asylum is truly the only proper place for him. But, unhappily for his friends, he has partial intervals of sottish repentance ; and the law chooses to do nothing to protect them from the curse and ruin of his presence.

Now, seeing how hopeless is this sot, if you ask the next natural question, Why did he become a sot ? you must direct your inquiry to some other oracle. If you ask Morbid Anatomy why the deceased under inspection had become a drunkard, what does that science say ? The reply will be that, after using the scalpel and the forceps, and staining very thin slices of the brain many fine colours, and then spying down microscopes of wonderful power at the slices, and taking the specific gravity of the brain, she cannot tell you why the poor man became a drunkard—you must ask elsewhere. Indeed, it is wonderful the things that Morbid Anatomy cannot find any signs of at the *post-mortem*. She does not distinguish between Queen's Counsel and potman. She inspected the body of Napoleon III., and recorded thus :—"The brain and its membranes were perfectly natural." No fragments or traces of broken empire visible to the highest microscopic abilities. So what chance that such abilities would be able

to answer you when you asked Morbid Anatomy whether that sot had ever signed the pledge, and, if so, how many times? If you ask his friends, you will probably learn that he had signed half-a-dozen or a dozen times. They hardly noticed the last few times; he had often signed of late, being as ready for intemperate abstinence as for the opposite form of intemperance.

Yet we want to know why the sot became a drunkard. If Morbid Anatomy knows nothing about it, whom shall we ask? Our friends the teetotalers press their answer: It was because of the liquor. Well, of course, if there were no liquor, or if he could have been excluded from it, he could not have drunk himself into a sot. That is clear. But it is nothing new of powerful arguments to find that they do not apply to the case in point. Who was he before he became a sot? One of the people; an equal amongst equals. And to exclude him from liquor, you must exclude his equals the people. But his equals the people will not be excluded. Persons of ordinary self-respect and self-reliance will not undertake a pledge of intemperate abstinence—much more will not be forced into it. In fact, teetotal comprises but a small portion of the community—divided into three sections of cha-

racter : firstly, those strong, good-natured men who sign on philanthropic grounds ; secondly, weaker, sensitive-minded persons, who are influenced to sign, but who generally require a little stimulant when out of health ; and thirdly, sots in their phases of repentance. And we need go beyond the *naïve* view of these good people, who only think of the liquor and the thirst, if we are to reach any more searching and thorough solution of our grave question, why did the sot on the *post-mortem* table drink himself to death ?

You might try the question on some sot not yet dead, and ask him why he drank thus criminally. But you would find him an irreclaimable liar ; he would say he drank only very little indeed ; had had none the last few days. Why did he take it ? Oh, he felt so low he could not do without it. You may leave off questioning him. His brain is shrunken, and his membranes thick.

To learn why the sot drank we must turn to some science which, whilst it treats of man, does not ignore the differences between man and man. Is there no science which touches the difference between a Queen's Counsel and a potman ? Do all sciences agree in saying that as far as they are concerned there is no difference ? We know science has a levelling tendency.

We are not without a considerable number of sciences nowadays which consider man in various aspects. There is anthropology, the science of the varieties of man as a species, and of his place amongst the apes. This will not do for us; Queen's Counsel and potman are all one among the apes of anthropology. Then there is ethnology, a respectable old science, which studies races of men with more regard to their human side. But it ignores the individuals, and will not help us. Then there is something *soi-disant* "social science," which is an attempt of people to deal scientifically with things before they know them; and Science is not in her element when dealing with the unknown. It is a science of things-in-general, without much regard to particulars, and will not help us. But there are also sciences bearing on individual man. There are the old mental and moral philosophies, as well as the new material philosophy, not necessarily moral, which latter will explain the human mind by a series of considerations founded on the responsive jerks obtained by tickling a decapitated frog. These philosophies have to oppose each other. The cut-and-dry discussions of mental philosophy will not avail us. It is a science in which the things are subordinate to the names,

and it would be just as well if it resolved itself into a dictionary of moderate size.

What we want is some science that will place before us, in a methodical way, the grounds of human motive, so as to enable us to estimate the forces for and against indulgence in the lives of men.

There is one science I have not named. Its title is promising, and it might prove the proper oracle for us to consult. That science is psychology. But I do not quite know where its oracle is situated. It has a journal, like most sciences nowadays, but in its journal, although there is much writing about the subject, one finds but little upon it.

There are psychologists I suppose, for I remember once taking up from the drawing-room table of a young ladies' school a book, on the back of which was printed, "*The Subjection of Women*," and I was about to look into it, hoping to find some better way of subjecting them, when, in the page I chanced upon, the first thing that caught my eye was, "*and doctors are not psychologists*." This set me musing, until I closed the book, and do not know to this day what means of better keeping women in their places the author—Mr. Mill, I think—had to propose. Evidently Mr.

Mill thought some people are "psychologists," if doctors are not.

For the subjection of women, I doubt but their old friend Cupid is the best psychologist; and a far kinder friend than those twaddling polygynækophiles of the London University-senate, who tempt poor Psyche into the hard struggle for their degrees. And then, if she succeeds, call her a Bachelor and a Master, as if she were a man. And then shut the door of their lower house in her face, when, all the while, the only right of male masters to enter that door is the degree, of which Pysche may have the pains, but not the profit. Cupid never served poor Psyche so. Only senescent pedants of a wrinkly age outliving young Cupid, an age when women soften the head even more than the heart—only such doting gynækophiles would think this a cure for the "subjection of women."

But I digress, and, in short, it appears that we cannot discover a science that will help us, and in the meantime it may be well to do the best one can to settle for oneself the question why the unfortunate deceased took to drinking?

In considering the mind of man, so as to study the causes of drunkenness, we must start from this principle, without a just appreciation of

which we cannot understand the formation of human character,—the principle that every individual exists in two distinct phases : phases which are distinct to whatever depth you analyse the character of man, and which remain distinct throughout every development and extension of him, however manifold his powers become. These phases may be difficult to name, but they are not difficult to identify and recognize, and I care more for things than for words. One of these phases is the man as the subject or seat of his own natural emotions, and the other is the man as the seat or subject, or object, or what you will, of what other people make him know and feel. I mean the man as a seat of the set of feelings that make up conscious life ; and the man as a unit, under influences dominating his spontaneous powers. The man feeling, seeing, enjoying, suffering ; and the man held by the influence of other minds and compelled by them to reflect their feelings and sights and enjoyments and sufferings, not as he chooses but as they choose ; so setting up within him reflections of their feelings and views and enjoyments which compete with his own natural feelings and views and enjoyments, and are often antagonistic to these darlings of his nature.

How shall I best express this antithesis? Per-

haps if I call the feelings, views, etc., imposed on the individual by society, "common sense," it will be best. Many people use this term vaguely, and half fancy it means vulgar or ordinary sense. But common sense means the sense capable of being common to two or more individuals; in short, the sense we seek to impose on each other and are impatient if we do not succeed. Let us then call the sense imposed on the individual by his fellows *common sense*, and the sense which the individual has naturally within him as his own native bent to this or that feeling *individual sense*.

If you want to thoroughly realize this division of the feelings within, you may look to the lowest or the highest of your mental life. At its lowest, individual sense is that sense which makes you think it is worth while for Nature to keep you alive; and that there is a great deal in your particular self which makes it worth more consideration than the selves of other people. On the other hand, common sense is that sense which will very readily do without you shortly after you are gone. This is their meanest and least worthy field of opposition. Look now at their opposition when in their highest refinement. In its highest refinement the individual sense asserts its claim to govern philosophy: much to the disgust of com-

mon sense. The philosophy of individual sense is the intuitive philosophy: the philosophy of the man feeling that good and right are truths of nature within him. The philosophy of common sense is the utilitarian philosophy. In the common-sense mouth of Hobbes it says, "Good and evil are names that signify our appetites and aversions." In that of Locke, it says, "Good and evil are nothing but pleasure and pain." In Bentham, "Take away pleasure and pain . . . and . . . justice, duty, and virtue are empty sounds." In Helvetius, "*Il lui est aussi impossible d'aimer le bien pour le bien que d'aimer le mal pour le mal.*" This philosophy is the philosophy of men looking at their neighbours with the common sense which their fellows have implanted in them. They see their neighbour or by reflection see themselves, and their attention is upon the individual, regarding him as he goes to what he thinks good or pleasant and recedes from what he thinks bad or painful. And they see that it is surely a matter of going or coming, attraction or repulsion, whether you call it good or pleasure, bad or pain. And so it clearly is from that point of view. But it equally surely is not so, if instead of the notion of an outsider attracted or repelled, you contemplate within, and in your individual

sense feel that the feeling of goodness in your act is not the same as the feeling of pleasantness.

So neither of these "philosophies" convinces the other, nor ever will until the millennium. Next note this important truth, that individual sense and common sense compete with and oppose each other for power over the stores of memory. So that, according to their respective hold upon those stores, the man's readiness for use by himself and others is different in different people. A person who has strong individual sense—which is much, but not quite, the same as saying an emotional, vivid person—reaches best the stores he has in his memory when his emotional nature is aroused and lively. Otherwise there is darkness in his chambers of imagery. If an actor or speaker, he acts or speaks best when not dyspeptic and dull. On the other hand, a man whose sense is chiefly that common to himself and others, a kind of man who never means more than other people say—which is much the same, but not quite the same, as saying a dull common-sense kind of man—has the advantage of possessing what he has in a way independent of his feelings at the time. He does not want a spirit lamp to light the chambers of his imagery. Despises it. It is diffuse daylight in such a mind. There is no unfairly kind illumina-

tion of one side of things, as there is when the light radiates from a glowing centre.

Now memory needs to be understood. Many suppose that when they, after a long interval of time, remember anything they remember the thing itself; they think they go right back and touch the thing with their memory. But see if this be so. Rather when a thing occurs which is to be one of the few things long remembered,—such as your first meeting those lovely eyes, etc.,—the thing comes again in the mind because it made so much impression, and then it comes again—no, not it, but the former recollection of it: partial, and tinted, and spotted, as if seen through a bad glass, so that you want to see those lovely eyes again.

And if this poor memory of the thing does not come a second time into the mind it cannot a third. Of course! you say. Very well; but your “of course” ought not to be so easy as not to perceive that this explains the fewness of the memories that remain from remote life, and the distinctness (apparent) of the few that persist. For if memory went back and touched the bygone things, why should it not equally touch all the things you once dwelt upon? Yet how limited is the range of memory

into the distant past. And why? Because it reaches not the things of the distant past directly; but only by the steps which its former acts planted in the interval. So that it steps by its last step to its last but one, and so on and on. And where it has stepped often enough it can step again towards a long bygone incident. But where it has never stepped it cannot after a certain lapse of time step at all, but so much of the past is in oblivion. Hence you must ponder upon what you want to remember.

Now, as to these steps of memory. When that which recalls the bygone incident is the individual sense—that is, the spontaneous life of the mind—then this step of memory is only available for future use of the individual sense or spontaneous life. When common sense—that is, the external influence of others—raises reflective knowledge of a thing in the mind, and this knowledge is remembered, the step of memory is under the power of common sense.

And in different minds individual sense, or common sense, may so preponderate that in one man the ways of memory are chiefly under individual sense, or the spontaneous life of the mind. Such are, amongst actors, those the late Mr. Phelps called “stomach actors,” who act

well when not low and dyspeptic. On the other hand, in some people the memory is nearly all under common sense, and has to be questioned out by external influence or requirements.

Now every act of memory under individual sense makes a stepping-stone whereon the spontaneous life of the mind may travel in the future. Likewise as to common sense. Thus is the plan of the mind enriched in either case, and common sense has its ways, and individual sense its ways; but individual sense is the spontaneous life of the mind, and what it lays hold upon constitutes the lustre of the individuality if any. The labyrinth of its memories is yourself,—your identity in the lapse of years. By the repetition of its acts of recall one year certifies another, reaching and continuing the memories transmitted through from before. On its longest worn tracks you travel easiest, hence old age remembers the long-remembered things.

On the other hand, the things taught you by the sense imposed on you by others are put together, at school and otherwise, like the parts of a building, so that you are thus so far edified or built up, put together under the effort of your will; effort which is often painful. Look at the face of a schoolboy at sums, if you don't

remember the pains you took. What is thus put together by the will is reached by effort of the will. These are the things others can demand of you and expect you to know.

But the individual sense is a different kind of thing, and goes to work a very different kind of way—a way of its own. Its duty in the mind is of an importance that is overlooked by common sense. Common sense never understands the individual. No individual ever thinks himself quite properly understood; that is why he goes on making a fuss, political or otherwise. If an eloquent man, in vain he promises silence. The long-practised phrases must flow. They must take some form or another. Just—if I may compare humble things with exalted—as in the case of your cook with his well-seasoned “stock.” Anything may be had on short notice; so that if you want ox-tail, the tail can be put in, and you have ox-tail. But pray take something.

The individual sense has to make what is called a *self*, or *ego*, or *ich*, or *moi-meme*, out of scraps and fragments, which are the experience of “one’s” life. Think how you believe your mind to be one continuous thing. Yet how, pray, did it become so? Was it continuous in

the origin and course of its activity? The life of one's mind is a most broken thing. First, it is banded by sleep with darkness across its light, as a tiger is striped. And as to its waking times, the individual sense flits from object to object, catching this into consciousness, then that, with intervals between the glimpses: glimpses now of what the eye sees, now of what the ear hears, now of what is bygone, as you "think" of one thing after another: the memory serving you with views tinted or spotted by your relation with the thing remembered, so that you see imperfectly *instar speculi inequalis*. Thus, as you ponder, attention fastens upon this or that revolving in your mind, and if there is "much in you," the revolving is large and active, and if you are "sound" it is fixed on true things, things capable of certainty. But some things not capable of certainty must have a share of attention, or you lose the element of good luck. Luck requires a power of attention to things not capable of certainty. That is the reason why those who put all their attention into things capable of certainty, over-scientific students, turn out so very unlucky in after-life.

But how do you suppose these scraps in your

consciousness join themselves into an *ego* or self, a "mind" which seems to every one to be one continuous thing? You cannot find an analogy for it, unless you remember how the glowing end of a burning stick when whirled round quickly looks like a bright ring; or how as you go quickly by a park-paling the chinks in it show you a continuous view of the park on the other side. Each chink gives you a small part, but the eye has a power of gathering these parts together, and making the park on the other side of the paling appear, as it is, continuous. It is the same power of the eye (really weakness of it) which you remember in the thaumatrope; that spinning toy with a jockey on one side of the card and a horse on the other, which, when you spun it, put the jockey on the horse; or that more wonderful elaboration of the same thing in the wheel, that, whilst you looked through chinks in it at the pictures inside, and the wheel was going round and round carrying the chinks before your eye, made the people in the pictures hand their heads to each other, or give away each other's legs all round.

There is in your mind a power that does the same by the scraps which come into it daily. And this power is the individual sense. It creates

the circle of oneness in you. Your mind acts the thaumatrope. In some the spin is fast, in others slow. As the circle made by the revolving spark arises in the imperfection of vision, so the circle of oneness of the mind arises in imperfection, which cannot follow the causing movement, and hence asserts a settled unity—the individual sense. Now be sure that the common sense imposed by others would never create an individuality in the mind. It does not spin, and is not deceived by individuality ; the individuality is made by the thaumatropic spin of the things that have pleased you in bygone time. They spin into oneness because the quickness of that which causes your mind is too quick for your mental eye, and the dance of them is the pleasure of your life as a man, as distinguished from the molluscan pleasures of the self-supporting appetites.

We are getting near the Queen's Counsel and the potman. The potman is chiefly molluscan, with a thaumatrope scarcely worth speaking of. The Queen's Counsel must have a brilliant thaumatrope, whirling one client in after another, and making them hand over almost anything except their heads and legs upon occasion. And this thaumatropic spin is the joy of life, and he who has tasted that joy will not be easily contented

short of its realizing illusion. How does this thaumatrope begin spinning? and what keeps it going? What is the effect of quickness of it? and what of slowness of it? In the one case life is vivid and bright, but in the other you seem to see between the scraps of which the show is made up, and it might be the 9th of November. For the chief place in such a tawdry set-out appears plainly not worth the having. Nay! you would not be a Bishop, or even a Judge, and as to what you are, there is no saying how tiresome it is. When this kind of weakening and spoiling of individual sense has taken place to a serious extent, the person is what is called "morbid." His estimate may be correct, but it is reached by weakness of the spin of his vital power, and hence is not a thing to give pride or pleasure. Who then can help him? He may go to a friend, and try to get his thaumatrope a twirl from outside, and if the friend can make a joke or two, or arouse feeling in any way, there may be slight temporary revival; but if the friend has only common sense to offer, that won't spin the thaumatrope. All the influence that the common stock of sense can have won't raise the strength of the drooping individuality. The common-sense man may tell you what he

knows ; but perchance you know more than he. Perchance you know too much. And knowledge is not power unless there is individual sense to use it.

Such experience does its sufferer at least this good, that he, for the time at least, knows that the vigour of his individuality belongs to nature, and is a thing he can no more call up by his will, than he can create oxygen or gold. Like its Maker it is, and it is what it is. This reality is the best and the worst of individual sense.

This absolute nature of the individual sense when at its best exalts the mind of a man so that he becomes a seer in the highest meaning of the term. Common sense levels all to one common view. Throughout history they have contended, and throughout social life they contend now. Among the lowly and numerous it is preposterous not to be subject to their common sense. In exalted life too much common sense leaves unexplained the exaltation. Common sense in a Cabinet of Ministers of a great nation unites them with the many. But if the nation has to gather up its energies to a supreme act, as of one individual will, too much common sense may make the ships go half-way up the Straits and then come back. True, Cæsar said, "Maxima

fortuna minima licentia est." But none knew better than he how such licence is least for tergiversatile common sense.

Doubtless, if you will, individual sense in ordinary minds is more likely to be nonsense, and common sense good sense. But their opposition should lead us to study the very different bases of power or influence which they respectively work from. Common sense can take good care of itself because of its hold on the language understood by the numerous and lowly, our masters. So that common sense prevails in common interests: it is *interrealized*, if I may coin the word, between people. But individual sense being the life of the mind has its strength in the man's self independently. And this is most unfortunate when individual sense is morbid, because as an actual sensation it overpowers common sense within that particular man. For common sense is as to each man an abstraction, not real in any one, but interrealized by common consent of two or more.

Thus an individual came to me and wanted to know what could be the matter with him, that when he entered a room or a church some one was sure to cough or sneeze. I tried common sense on him, showed that when a good many

people are under the influence of each other's presence the chances are that one or another has a cough or a sneeze which he is keeping in for the general good, but which a trifle would let off, especially if the door were opened. I might have talked to the wind. His sensitive emotional nature made him feel the cough or sneeze in his very heart ; but what I said only went into his ears, and became, at best, a second-hand reflective affair, remote from the heart. Common sense was not a matter of feeling.

Although it sounds like a paradox, yet it is true that common sense does not keep you sane. *Sanity* depends on correctness of that individual life of the mind which I have called *individual sense*. Many people suppose they are most sane when they think hardest. But sanity is an affair of the unreasoning faculties. And you think your way out of it easier than back again.

We get but slowly towards the question why the sot drank. As yet we have seen that—

1. Individual sense and common sense are distinct in the mind from its lowest to its highest.

2. Individual sense and common sense compete for powers over the memory, and acts of memory arising from either throw the mind under the one

or the other, so that some minds are very much subject to the one or the other.

3. Individual sense composes the unity of the mind, as a thaumatrope composes a unity for the eye, and it is subject to slow times, but prefers quick times.

4. Individual sense is a reality within the man. Common sense is an interreality realized between men, not in any man.

You would not understand all this from the cut-and-dry analysis of mind they give you in a philosophy class, where they suppose all people to be alike. True, all people are alike in a way, very much as spider-webs are alike;—great spider-webs and little spider-webs, with the threads pretty similar, and always with Mr. Spider ready to take advantage of any one caught. But there is a difference in people's *inclination*, as it were, which word itself infers that if you did not prop them up they would fall in different directions, like similar figures with their centres of gravity in different parts of them. If you make due allowance for natural inclination, you will know how common sense has less power over individuals than it is customary to suppose. Life is one long contest of the individuality against the teachings of common sense. The schoolmaster tries

to teach the boy the things known amongst men : rational truth ; the interreality which founds the social world. The boy's individual sense seeks constantly to escape ; struggles so that youngsters with strong individuality fairly groan over their lessons.

As the youth comes through his training, all that is fresh and young and individual still struggles against the common and accepted, otherwise his consciousness tells him machinery will master motive power. Here comes the difference between Queen's Counsel and potman, for if the tutor has well and continuously done his work, and if the lad has proved capable of yielding the individual sense before the common sense in due degree, then true adulthood is at length reached, and slowly comes that great change of personal life, when the history of boyhood, which was a story of its own little recollections of itself, becomes, you know not how, converted, so that the past is no longer *his* past, but the past of his race and nation, and he looks back to the dawn of human history and does not even mark the time when his personal life struck in, and he is strengthened by the highest and best that is common amongst men. But perhaps to the potman this change never comes. Doubtless many

never become adult in this noble sense, and for our question of the influence of alcohol we must recognize this difference of capacity and of history.

To make a Queen's Counsel you need both strong individual sense and much capacity for common sense. A just combination of these constitutes what is called *intelligence*. This intelligence is supreme over both individual and common sense, above their highest, above their contending philosophies, intuitive and utilitarian. Intelligence has no philosophy. For purposes of expression it leans to the utilitarian philosophy, as being most expressible. Different degrees of common and individual sense, justly proportioned, constitute different degrees of intelligence. Amongst Englishmen this state of balance is fortunately the rule, so that Englishmen are usually intelligent, if not all very much so. In Ireland the individual sense prevails. They wage war as individuals; a little spirit excites them much. In Scotland, common sense preponderates. They are Liberals and fond of education. They take a deal of whiskey without much harm. Moderate degrees of excess of individual or common sense, such as those to be met in average Irishmen and Scotchmen, are not serious. But you get more marked disproportion in some

minds. Thus, some persons have very little indeed of individual sense, but they have large capacity for common sense. These are what, when young, are called good dull boys, and, as they grow up, make up into good mathematicians, as to whom Goldsmith's and De Quincey's opinion may be noted. Other persons have neither individual sense nor fair average capacity for common sense. These are and remain dolts, and, with all the amount of other people's money that School Boards may spend in keeping debased Queen Anne buildings over their heads when young, they will make very good potmen. Alcohol does not do them much harm, nor teaching do them much good. In their fevers, as Dr. Stokes says, they bear alcohol well—they need it. Their failing is a want of external support to their pluck when under protracted trial.

Unhappily, also, you may get strong individual sense with little capacity for common sense. Here, as a rule, you may look out for trouble of some kind. These are the born intemperate. Their intemperance may take a good direction, for which all men bless them, and call them good geniuses; but their intemperance may take a turn in the direction of self-indulgence, and if you are to save them you must recognize their danger early, and

begin early with your means. Keep them from alcohol. Make them sign the pledge. They readily do so, being naturally intemperate. Watch intemperance in childhood, and attend to children who show much individual sense. Their blood is too stimulating, or goes too freely to the brain. That set of nerves, which narrows or widens the blood-vessels, controlling the supply of their stimulating contents as the magistracy controls very properly the licensed victuallers, allows too much license to the brain. Such children get almost tipsy on their own spirits. Not that individuality in a child is bad. It is a good thing if balanced by sufficient common sense. See that it is so by imparting common sense quickly, and in large proportions. Perchance you may thus enlarge their capacity for common sense; I hope so, but am not sure. For common sense is an abstraction, and individual sense a real thing in the mind. But we need not fear a sound individuality. It is wanted as much as melody is wanted in music (*pace Wagner*), or as the proper nature is wanted in the growth of a tree. For a tree rises into its form partly to meet the force of the wind, and partly to seek the light of the sky; yet there is needed within it its own nature, keeping it in due shape according to its kind. So each man must, besides

all that outer influence brings to bear upon him, carry his own sense. It is as useful to him as an auxiliary screw to an ocean-going ship.

And now for the power of alcohol. *Alcohol weakens common sense in its opposition to individuality.* That is its blessing and its curse. Its blessing to the many it blesses, and its curse to the many it curses. It may act on the liver ; it may feed. But many things act on the liver, and good food is not scarce. If, recognizing the hopelessness of the sot when once he is a sot, you inquire why he drank ; it was not for his liver, nor for food ; but because in some form or other, without reasoning it out as I have reasoned it out, he has found the power of alcohol. The power of alcohol in the world is due to the fact that it keeps down the oppressive power of others, and of their common sense, over the individual sense ; and so makes a man better company to himself and others. It places a man's individually-stored memory more within his own power ; raising his individuality temporarily but with danger. Makes the coward sham brave ; makes the dull a little lively. You will observe the effect easily after dinner, when the wine has gone freely round. Individuality is up ; common sense down. It is to the waiters a jackdaws' parliament—all talk, none care to hear.

Before dinner he was a welcome scapegoat who would open his mouth to speak. See how aptly the peculiar power of alcohol is recognized in drinking "toasts." No prince even would drink his friend's health in water. He takes that which will spin his own and his friend's thaumatrope a little swifter, and keep down the common-sense influence of business relations. This is all very well at dinner, over toasts, but is very much the opposite of well when men in business take the now too frequent mutual glass of sherry. It reduces the perception of their common-sense relations, and puts the man whose mental balance is inferior into the power of the man whose balance of individual and common sense is more stable.

You observe the effect in sickness. In a fever the sense of individual strength is failing, and pluck gives way. Muttering fear becomes horror and violence; then alcohol will bring back the man to his own help. You make him again come to himself and believe in himself by its aid. The delirium so violent was as that of a shying, timid horse. Alcohol gives the patient courage, and he is fearless and quiet again. In short, it is a medicine of the mind, with some power over the body. And those whose human life, like that of

my fish and whole-meal and water man, is stunted and overpowered by observances imposed from without,—a too great influence of the imported sense of others upon them,—a little alcohol will pick up their spirits, and make them act a little more of their own sense in confidence in their own nature. Giving even temporarily a stronger and more pleasant thaumatropic play, it sets up in the memory steps more numerous and agreeable; so that the man's mental stores are more within his own reach, and he passes the inevitable twenty-four hours more to his own just satisfaction.

But as to those whose common sense is small, and their individual sense great, alcohol acts upon them as a poison of the soul. Naturally unchecked by common sense, the poor creature enjoys the spin of his own mind until it is a passion so to do. And alcohol reduces the naturally deficient power of common sense upon him; and thus as he takes it he becomes more and more wrapt up in the pleasures of his individual sense, until he is known to be a sot; and when the horrible discovery is made to him he has not even common sense enough to see that this result has put him down as an individual for ever. So he fears common sense; fears his own conscience and the opinions of others, until he regards his conscience, not as a

guide, but as a foe from whom to run, just as rogues see the policeman, not as a protector, but as a sign to decamp.

And Morbid Anatomy has him. His membranes are thick, and he has a lie at the bottom of his soul; and the lunatic asylum and the coffin are ready to receive him.

Unfortunately as to these two classes, those that may and those that may not drink alcohol, the indications are usually reversed in these people from their own point of view. For inevitably the man who is overpowered by his fellow's common sense will not have pluck to think so. And the chances are that under pressure he will readily sign the pledge. Whilst the fellow whose individuality has overpowered his little common sense will not be able to perceive this fact, and he will hold the pledge in scorn until he is a sot. Hence it is better for any one to take advice in time on the subject of alcoholic stimulants. Let him ask the family doctor, who has access to his friends and knows his constitution, and can learn whether there are signs of inherent weakness, and, if so, whether it is weakness of individual sense or of common sense, or of both. The balance is so arranged that a little alcohol, as Sir James Paget very ably showed, does most people no harm.

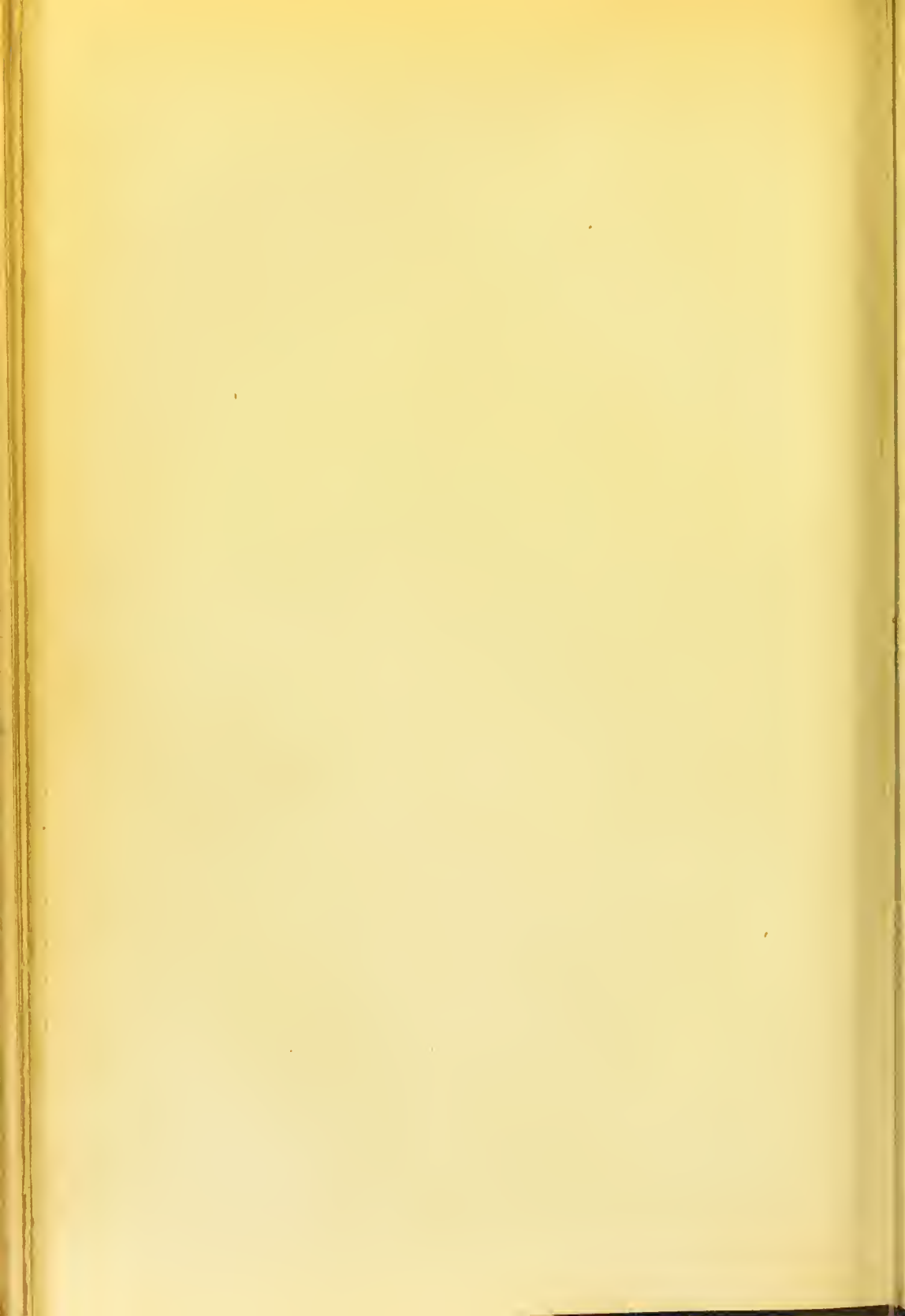
Yet the question is peculiarly a question for each person himself, seeing that there is undoubtedly danger to many, and equally undoubted advantage to many others, in its use. And my object in this paper is to show that it is a question not to be left to rashness and fanaticism, but one requiring the largest consideration of those highly artificial relations under which civilization now places variously-natured individuals.

Rashness and fanaticism have failed. Drunkenness prevails in spite of teetotalism, whilst the pledge inflicts useless self-torture. Let the legislature be urged to carry out its plain duty,—in giving powers to put the sot under control, and so do the most beneficial act to vast numbers of suffering families that ever was done by any legislature. For the family-destroying sot is the most pernicious criminal in the land.

VII.

THE ACTION AND USES OF ALCOHOLIC
DRINKS.

BY SAMUEL WILKS, M.D., F.R.C.P., F.R.S.



VII.

THE ACTION AND USES OF ALCOHOLIC DRINKS.

IN endeavouring, with any hope of success, to form a true estimate of the value of alcoholic beverages, we ought to possess a knowledge of their precise action in the animal economy, and to be able to judge correctly of their effects in individuals according to the different circumstances of life. It is a remarkable fact, however, that physiologists have not yet discovered the destination of alcohol after its introduction into the stomach—that is to say, what ultimately becomes of it in the system. Although spirit to the amount of millions of gallons is annually consumed in this country, yet after it has passed the human throat, its history is involved in the utmost obscurity. It is true that its pernicious effects are generally only too apparent when imbibed in large quantities; in some persons it may seem to be productive of fat, whilst in the larger proportion of the community its dire consequences on the liver and other organs

are only too well known; in some exceptional instances it appears to be taken in inordinate amounts with perfect impunity, and where this occurs, it must be decomposed in the system, and its constituents or new products eliminated, leaving behind it no apparent hurtful effects. In moderate doses it may either do harm or good; where the effect is beneficial it is supposed to act either as food or as material in the production of heat.

The scientific and physiological discussion of the question, as well as the known poisonous effects of alcohol when taken in large quantities, may be put on one side until fresh light break in upon us; in the meantime, medical men and others must be constantly asking themselves the question, whether or not alcoholic drinks are useful adjuncts to the ordinary diet? We all usually answer this question by the rough-and-ready method—the state of our feelings. Then arises another important query—how far should our feelings be our guide? Now, if most persons analyze their sensations after the imbibition of any alcoholic drink, they will soon discover that to describe the effect produced upon them by it as stimulating is a misnomer, and that, consequently, the employment of the expression almost begs the whole question as to its operation and value; for there

can be but little doubt that it is owing to this misapplication of the term stimulant to alcohol, with many conveying an idea of strength, that causes it to be so universally recommended, and taken with so much satisfaction. If a person feels low and a glass of wine produce a pleasurable effect, it is easy to regard it as a stimulant, and as having afforded some proportion of strength.

Let us see if this really be the case. The present is not a fitting opportunity to discuss the exact amount of stimulating effect possessed by alcohol—that is, its power in exciting the nerves and the brain to increased function and activity; it may therefore suffice to declare that its stimulating effects may be regarded as *nil* compared with those which may be styled its sedative or paralyzing ones. In a word, alcohol, for all intents and purposes, may be regarded as a sedative or narcotic, rather than a stimulant. And it is this property of alcohol which renders it of so great value in certain temperaments, and under many trying conditions of life. The stimulating effects compared with the sedative are nearly in the same proportion as in chloroform, opium, and some other narcotics. Alcohol may be taken by the patient at the recommendation of the medical

man under the false name of stimulant, and benefit may accrue from its use ; but its value may depend upon properties of which the patient at least is unconscious.

A few examples may suffice to convince the reader of the truth of this proposition. A severe attack of toothache will speedily disappear under the soothing influence of a glass of brandy and water, or rather whiskey and water, which, according to present fashion, has usurped the place of the older medicinal and respectable spirit. It surely sounds very like raillery to recommend a sufferer, groaning under the miseries of toothache, to take a stimulant for his already over-excited nerves. He requires a sedative, and he finds it in his grog. A larger dose of alcohol is as complete an anæsthetic as chloroform, so that a drunken man may have his teeth knocked out in a brawl and be quite unconscious of the disaster. If, then, alcohol can relieve the severe neuralgia of toothache it must assuredly have a corresponding effect on those who take it for various other purposes ; when, therefore, these persons like it, and declare they feel better for it, we are bound to ask in what way do they feel better. Do they mean that all their faculties are stimulated to renewed effort by it, and therefore, for a time, strengthened and

improved? Does a man who is engaged in an abstruse problem find assistance in its solution from the bottle of wine by his side? Do students who sit up late working for college prizes find aid from alcohol? I have frequently asked the question, but have never yet found it answered in the affirmative. Would a musician or singer find his touch or voice improved by the so-called stimulant? Assuredly not. As an instance in point I may quote the case of a gentleman who, being about to perform a solo on his violin at a public concert, and feeling nervous, was advised to take a glass of wine. This he declined, declaring that he dared not, for although it would give him courage to stand before his audience, it would at the same time cause him to blurr his notes; while rendering him unconscious of his degradation, by benumbing his sensibilities, it would also take the edge off his bow. In like manner I have heard sportsmen declare they have added little to the weight of their bags after being tempted to linger long at luncheon over their beer or wine; and cricketers, also, are often seduced in the same way to lose their game. It is a common experience that field labourers will reap less corn and cut less hay after their supply of beer. If it were a stimulant they would be too readily plied with it by

their masters. Every medical man, too, must be familiar with that class of wretched and ever to be pitied women who give themselves over to drink until, lost to all sense of shame, they soon pay the penalty of their folly in a premature death. In these cases the habit has been formed and fostered by the facility afforded by alcohol in gaining some oblivion from a painful sensation, be it physical, mental, or moral. When all the world is dark around, and the sensibilities are keen to wretchedness and unkindness, a little alcohol will deaden the feelings ; herein, then, dram-drinking reveals the secret of its charm. Amongst the lower classes, too, when death comes amongst them, and they are overcome by sorrow, it is no uncommon thing to see all the friends of the deceased considerably the worse for drink. Is their sorrow so pleasurable to them that they fly to alcohol wherewith to stimulate it ; or must it not be evident that they recognize it as a narcotic ? How can they drown their troubles in the bowl if there be not Lethe in it ? If it be said that the expression *In vino veritas* implies that wine brings out the characteristic qualities of man, I should assent, but with this explanation, that by paralyzing the controlling power it allows liberty to the passions to have their full sway. But, surely, so

far from rendering the senses more acute, the benumbing effects of wine have always been known, for does not a very ancient Book declare that "every man at the beginning doth set forth good wine, and when men have well drunk, then that which is worse"?

No further evidence is required to remind the reader of the true properties of alcohol, or to convince him that the appellation which it has so long borne of stimulant is erroneous. Were however the facts not before us, we might be sure that an article so universally consumed must be sedative or narcotic. This we might assume from what we know of the longings and wants of the human race; it would, in truth, be a marvellous fact to find any people on the face of this earth craving after a stimulant. Is not the universal refrain of humanity one implying trouble, anxiety, and never-ceasing toil? and is not its aspiration that of repose? A holiday is a cessation of labour, and the highest hope of many is to reach that bourne where the wicked cease from troubling and the weary are at rest; or even, as in the heaven of some, to have existence without consciousness. The universal cry of the children of men has ever been that of the Lotus-eaters—

"There is no joy but calm."

We may be assured that mankind are ever seeking after those things in nature which soothe their aching spirits, and that they would hail the discovery of such substances as opium, Indian hemp, or tobacco. It were strange indeed if we found a people given over to a stimulant or a drink which sharpened their senses. It cannot be—alcohol must take its place with all the other substances which man has found to soothe him.

Although, as before said, the utility of alcohol must be judged of by the practical results of experience, yet it is important to clear the ground, as I have attempted to do, of the many erroneous views which are held as to its action, for by these means we shall arrive at a better decision as to its value in individual cases. Having got rid of the notion that alcohol being a stimulant increases function, and is a remedy for the weak, we need no longer attack the heresy which a short time ago gained some hold in the medical world, that in alcohol would be found the universal remedy. The dictum was short and logical. All persons who are ill are weak, and therefore all require alcohol. Now if we change its name from stimulant to sedative, the conclusion fails, for the premises are false. And by so doing we are by no means objecting to the use of alcohol, but merely

denounce its employment on fanciful principles. If we are guided by experience in its use as medicine or diet, it little matters what character we give it, for I am not aware that its effects, either physically, morally, or socially, would be more deleterious if called a sedative rather than a stimulant. We should, however, by changing the epithet, no longer be led by an erroneous name to order a young school-girl wine because she looked delicate, or an old person an extra glass because he was not so strong as in his prime. This very loose reasoning and practice has brought much discredit on an article so valuable as wine. Weakness in the usual sense is no gauge for its administration, for in such a disease as inflammation of the lungs it is often given with marked success; and yet this is a malady where there is a rapid growth of cell elements; a process therefore arrested by a so-called stimulant, assuredly a self-evident contradiction.

As regards the use of wine and spirits as articles of diet, it were better to form a decision on no theory of their action, and assuredly not on their assumed stimulative properties, but leaving the scientific question at present apply ourselves to the consideration of facts, experience, and practice. There are some persons who posi-

tively declare they cannot digest a meal without wine, whilst there are others in whom alcohol as certainly arrests the process of digestion. Those who take a moderate amount at meals and other times—on whom I can rely—add support to the view which I hold as to its sedative action. They say they feel the benefit of a glass of wine or a little spirit at the close of the day, not to spur them on, or to enable them to perform their daily duties better, for it would have no such effect, but rather to quiet and refresh them when their business is over. They feel fatigued as the day wears on, their brain irritable or head throbbing, and a glass of wine sets them right; but then their work is done.

The arguments which I have used to determine the properties of alcohol, while by no means detracting from its value, would yet if rightly understood, I feel sure, go far to bring about the reform which the country so much requires. If alcohol be not a stimulant and a direct giver of strength, it need in no wise be taken by the strong and healthy. But at the present time there is a prevailing conviction in the minds of English people that alcohol in some form or other is a necessity of life—often and often do patients say to the doctor, “I cannot take beer,

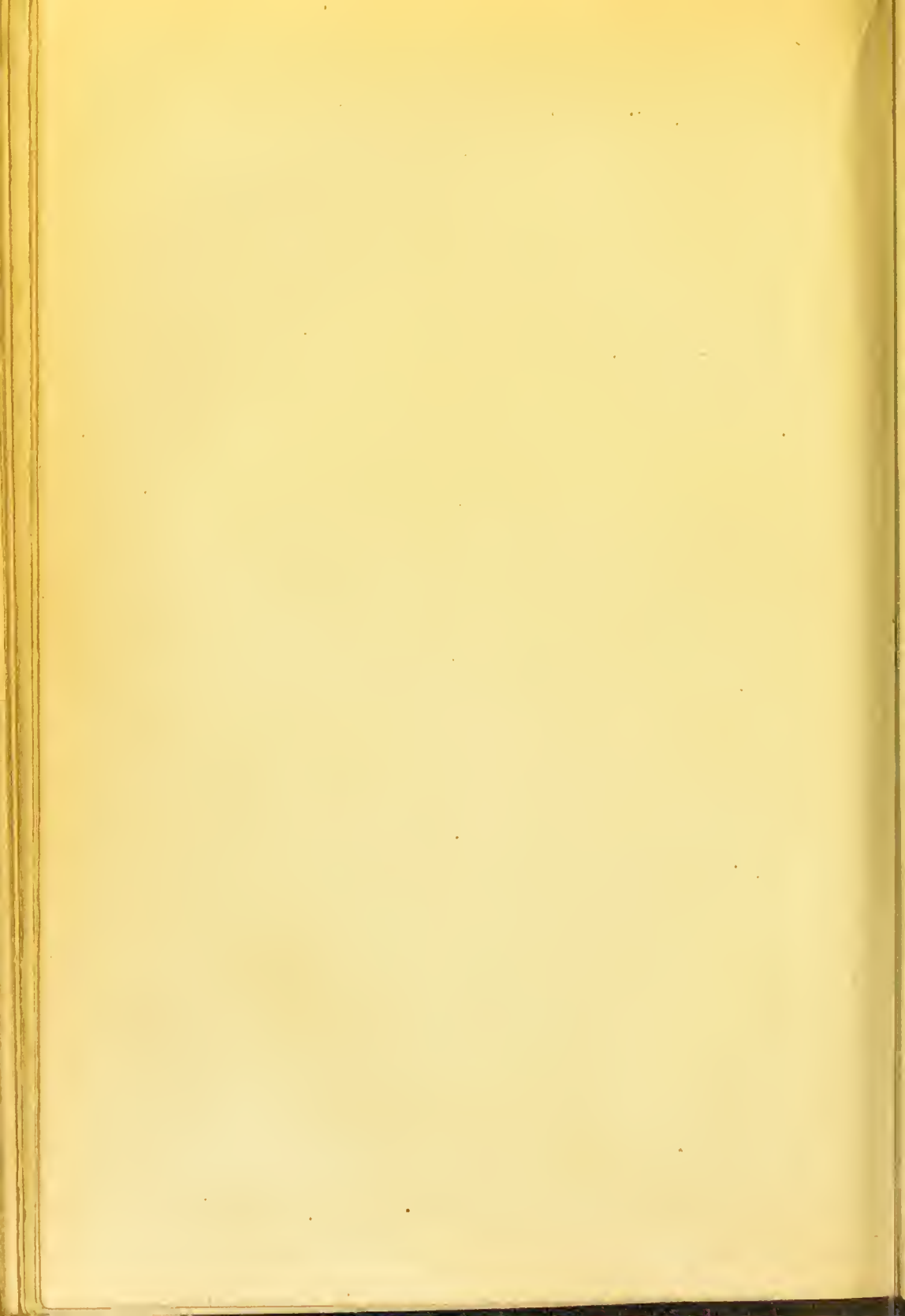
nor wine, nor spirits, what shall I do?" Numbers of persons injure themselves on principle, and if they are weak consider the three articles just mentioned appropriate to the corresponding degrees of their debility. If the doctrine that alcoholic drinks were not a necessity of diet could be accepted and strictly acted on, the remedy for intemperance is nearly found. Only let it be understood that children should be brought up without the use of fermented drinks, and that these need not of necessity be taken by adults, but that their use and amount should be regulated by circumstances, and the great curse of our country would be far on its course towards removal. In judging of the use of alcohol by the community at large we must be guided in the same way as we are by other habits of mankind. We see persons enjoying themselves in various ways, eating and drinking all kinds of food and beverages, occupying themselves with amusements of every description, and yet none of these would be allowed in Utopia. They get through the world, although indulging in certain habits, and declare themselves well—where, then, is the appeal against their procedure? If I, personally, am consulted as to the propriety of ordering alcohol in any individual

case, if there be no experience to guide me I am impelled by the principles I have enunciated. I believe alcohol soothes a worried nervous system, and by preventing wear and tear actually supports the frame, but, discarding the notion of its stimulating properties, I denounce its use in delicate children and in women who feel "low." I also strongly prohibit its use in the early morning; in fact, those who then wish for it have already imbibed too much. I always suspect people who require "something" about eleven in the morning. Indeed, the man or woman who has an acute consciousness of the hour of eleven is a being both physically and morally lost.

VIII.

TEMPERANCE *VERSUS* ABSTINENCE.

BY JAMES RISDON BENNETT, M.D., PRES. R.C.P., LL.D.,
F.R.S.



VIII.

TEMPERANCE VERSUS ABSTINENCE.

THE argument in favour of temperance as opposed to abstinence from all alcoholic beverages, based on the universality of their use by mankind in almost all civilized countries and in all ages, which Sir James Paget has so well employed, is, to my mind, both valid and very cogent. If, as we are told, the famous Vincentian Rule "*Quod semper, ubique, et ab omnibus*" is to be accepted, only "with certain limitations," it may, I think, be taken as at least equally applicable to the temperate use of alcohol as to faith. To the broad statement that the moderate employment of fermented liquors is useful and desirable for most people there are doubtless numerous exceptions to be made. Different climates, different modes of life, and different constitutions, will show the necessity for modifying and limiting very greatly any such broad general affirmation. But if our attention be confined, say, to our own country, to the British

Isles, the proportion of exceptions to the general rule will be considerably reduced, and if our view be still further restricted to those past middle age who are subjected to the wear and tear of the ceaseless struggle of life in our populous cities, or even in many of our country districts, the exceptions would probably be not more numerous than will serve only to prove the rule. But what is to be understood by the moderate or temperate use of alcohol? On the answer to this question it will depend whether the position assumed can be maintained. It is not, however, easy to give a categorical answer to such a question. To lay down the same rule for all persons would be like saying that every one must take the same amount of water, of meat, of exercise, or of sleep. If there be any truth in the adage that every man by the time he is forty years of age is either a fool or a physician, it would seem that it would hardly do to say that every man must judge for himself. For even if we should pay the physicians the compliment of assuming that they, at least, would be able to decide how much wine was good for them, there would still be the former class to be instructed and guided by some rule. And without adopting Mr. Carlyle's estimate of the proportion of fools to the rest

of mankind, it may safely be asserted that with reference to the present question the proportion is considerable. Whose fault, then, is it that there are so many foolish and ignorant people, who cannot tell whether they are better or worse in health for the amount of alcohol that they daily take? The doctors, reply the teetotalers and some other equally dogmatic people. But, who have demonstrated by irrefragable proofs the dire effects of the abuse of alcohol? who have been loudest in their denunciation of the widespread evils of intemperance, physical, moral, and social? who have instituted and carried out all the laborious investigations into the physiological action of alcohol with the express purpose of determining its action and uses in health and disease? Assuredly the doctors. The utmost pains have been taken by the profession to enlighten the public on this burning question of the day. It is true that much difference of opinion prevails on the physiological action and therapeutic use of alcohol. But this is mainly owing to the undoubted fact that the scientific problems have not yet been solved. Hence in the vast majority of cases in which alcohol does good we do not know how it acts. We do not know precisely what becomes of it after it enters the

stomach,—in what, if in any, true sense it is food,—when the benefit which it confers is due to its stimulating and when to its sedative action. But that it does act virtually in each and all of these and, perhaps, also in other ways, it seems to me idle to deny. When a man is maddened by brandy, and with a flushed face, fiery eye, and throbbing pulse, loses all control over his actions, and murders his wife and children or blows his own brains out, are we not to admit such evidence as proof of the stimulant action of alcohol? And who that has ever had occasion to struggle with such an one can doubt that his muscular strength is, for the time being, enormously increased, however little enduring power it may have. No doubt there is a stage or degree of intoxication when the brain becomes narcotized, all power of volition is lost, and a child may restrain the drunkard's arm.

Nor is the evidence of the sedative action of alcohol less decisive. Without at present citing examples derived from actual disease, when some unfortunate victim of heartless fraud or subject of anxiety and carking care seeks in vain for rest and relief in the oblivion of sleep, or the overwrought brain of the student or statesman fruitlessly longs for respite from exhausting thought and mental strain, and on the advice of

friend or doctor, or from past experience, has recourse to a glass or two of wine or a tumbler of toddy, and falls into refreshing sleep,—what shall we call this effect of alcohol if not by the term sedative? And so it is true that one man may be rendered feverish, irritable, peevish, and quarrelsome by a small quantity of wine which will soothe the irritated nerves of another, and make him contented and amiable. The stomach of one man is irritated and offended by wine and his digestion impeded, whilst the appetite of another is improved and his digestion facilitated. The former is unquestionably better without alcohol, and he comes into the category of fools if he takes it, but the latter has no claim to the character of a physician if he abstains, at the bidding of either a mistaken fanatic or a theorist. And there are doubtless those who in rude health and in the full vigour of life are in blissful ignorance of the meaning of either dyspepsia or anorexia, and need neither the stimulating nor soothing influences of alcohol. To all such I would say, Abstain, run not the risk of dispelling your ignorance and losing your bliss.

But it is perhaps on the brain and nervous system that the greatest difference is seen as regards either the immediate or permanent effects

of alcohol. There are few people, I believe, who are aided in the actual performance of brain-work by alcohol; not that many, nay, most persons, are not rendered more ready and brilliant in conversation, or have their imagination quickened for a time. But the steady continued exercise of the mental powers demanded of professional men is more often impeded than aided at the time by alcohol. When, however, the labour is over, and the hour for food and rest is come, the question arises—Does a moderate amount of alcohol as a part of the restorative meal aid or not in repairing the waste that has taken place? Has alcohol any special advantage over other articles of diet in restoring exhausted nervous power or repairing the waste attendant on its exercise? I believe it has, and that where one man may be met with who finds “a few raisins” answer the purpose, there are more whose experience has told them that “three or four brandied cherries” are better, and the majority of those who have to go through the labours of a parliamentary session or any similar continuous mental strain will, I am convinced, admit that they do their work better and with more comfort to themselves if they take three or four glasses of sherry or claret as a part of their daily food. I agree

with those who have maintained that children and young persons do not, as a rule, need alcohol in any form, and believe it to be a grievous error to suppose that every sick or weakly child requires alcohol as a constituent of its diet. Judging from my own experience, both personal and professional, there is need for every one to relax his rule and modify his practice according to the varying circumstances of his life ; and to this most men's instincts prompt them. Many a barrister or doctor in his summer holiday feels that he does not need his customary glass of sherry or port, does not care for it, and does not take it ; but he no sooner returns to his duties than he becomes conscious that he is happier, more comfortable, and ready for his work by resuming his accustomed habit. I do not believe that such an one is, *cæteris paribus*, a worse but a better life for an assurance office than a pledged abstainer.

As regards the therapeutic use of alcohol, I believe there is much more real unanimity of opinion in the profession than many persons suppose, or than might be inferred by non-professional readers from a superficial perusal of the various articles that have appeared in the CONTEMPORARY REVIEW. The very natural and

wholesome desire to improve our therapeutic methods, and augment our power of controlling disease in proportion as our knowledge of its course and nature is advanced, almost necessarily leads to experimental modifications of treatment in accordance with new discoveries in science and the prevalent theories of the day. Nor is the temporary popularity of particular practitioners without its effects, sometimes most prejudicial, in this respect. In many cases where the therapeutic use of alcohol has either been abandoned or materially limited, this has arisen, not from any change of opinion as to its action and capabilities, but from more perfect knowledge of the nature and normal course of disease. Sydenham said of opium that it was "*Donum Dei, ut sine illo manca sit ac claudicet medicina.*" Most sober-minded physicians of any experience, even those who may be most chary in the use of alcohol, must, I think, admit that in not a few instances they would feel their art to be indeed lame and impotent if they were deprived of its aid. I, for one, believe it, as well as opium, to be among the gifts of God, accorded to man for therapeutic as well as other beneficial purposes, to make glad his heart and strengthen his nerves, though alas! too often perverted to his physical

and moral ruin. There are no sufficient trustworthy statistics available to prove to what extent disease may be safely and satisfactorily treated without the aid of alcohol. But that in many cases where it was formerly given as a matter of course it may advantageously be dispensed with there cannot be any doubt. In many cases of simple continued fever, when alcohol would formerly have been thought necessary, I am not in the habit of prescribing it during the regular course of the disease, although in the same cases, in convalescence, I believe it to be an important, often an indispensable aid. But in the severer forms of fever and in many of its more dangerous complications, I believe its use to be imperative, and know nothing that will take its place. In the crisis of many a severe case, when the action of the heart and the pulse is so feeble as scarcely to be felt, it is by alcohol alone that the life of the patient can be saved, and whether it act as a stimulant, or, as Dr. Wilks would maintain, as a sedative, is immaterial to me, if I find the fluttering pulse become steady, and can again feel the impulse of the heart, and thus tide my patient over the few hours that are to decide between life and death. But this is scarcely the place to enter on details of medical treatment,

or it would be easy to adduce many like examples of the signal aid afforded us by alcohol in cases of great danger. In the present state of physiological science we are not justified in allowing theoretical views and assumed or half-knowledge to take the place of real well-tested experience. Daily observation convinces me of both the benefit to be derived from the proper use of alcohol, and the vast amount of disease, and that of the most irremediable kind, that it induces when wrongly used.

And now as to the philanthropic, the moral arguments in favour of abstinence as opposed to temperance, what shall I say? In the first place, that intemperate language and uncharitable insinuations had better be avoided. On this score, many good people, and doctors among the rest, have much reason to complain. In the next place, that if every man is to forego his freedom of action because many make a licentious use of it, I know not what is the value of my freedom. If in the case of alcohol, as of meat, or any other thing, I am to abstain from what I conscientiously believe to be the lawful and beneficial use of it, "lest I make my brother to offend," my life would be an intolerable burden, worse than that of any ascetic monk that ever lived. And, worse still, I should

be perpetually giving the lie to what I believe to be a truth, that "every creature of God is good, and to be received with thanksgiving." Again, if I am to judge of the probable benefits to be derived from the abstinence principle in the matter of drunkenness by its influence in the cure of other vices, I have good reason, for the present at least, to remain in doubt. But in proclaiming and denouncing intemperance as the crying social evil of this country I will yield to none. It is equally fatal to health, peace, and virtue, to domestic happiness and social prosperity. Every man who has the least regard for either the physical or moral welfare of his fellow-creatures is bound to use every legitimate means and sound argument to exterminate this foul canker of society. For the intemperate, his duty and only safety is abstinence; for the temperate, his duty is thankfulness and unremitting effort to reclaim his erring brother.



IX.

A CASUAL CONVERSATION ON THE
SUBJECT.

By C. B. RADCLIFFE, M.D., F.R.C.P.



IX.

A CASUAL CONVERSATION ON THE SUBJECT.

THE day before yesterday, in answer to a verbal invitation to send a short paper of four or five pages to the present number of this REVIEW, in continuation of the discussion upon the Alcohol Question which has been going on in the last two numbers, I objected on the ground that want of time and want of space were difficulties with which I did not see how to contend to any good purpose. Half an hour afterwards, for no sufficient reason perhaps, I had changed my mind, and come to the conclusion that a simple report of a conversation I had had in the interval with a clerical patient might furnish not unsuitable matter for the short paper in question; and before the day was over this report was very nearly in the form in which it is here presented.

There was not much the matter with my clerical patient. He was, he said, without appetite, easily tired, in a state of unrest, unable to sleep soundly, not quite up to the mark generally; and after

that the conversation went on very much in this way.

Patient. I may be wrong as to eating, but I cannot be wrong as to drinking, for I do not touch anything with alcohol in it. All stimulants—malt liquor, wine, spirits, alike—stultify me, and you must not try to persuade me to take them.

Myself. Why do you speak of alcoholic drinks as *stimulants* when you find, as you say, that they always stultify you? Ought you not to regard them as *sedatives* in your own case? Or rather would it not be better to speak of them neither as stimulants nor as sedatives, for in fact they may be taken so as to be stimulant or sedative, or even tonic in their action. For several years, when I had to lecture on *Materia Medica* at the Westminster Hospital, I held that it was wrong to deal with any of these *materia* as necessarily stimulant, or sedative, or tonic; and I have not changed my mind in any degree since, except in becoming more strongly convinced of the stability of my position. As ordinarily given, opium may be regarded as sedative, but opium may be given so as to be stimulant, or even tonic. As ordinarily given, quinine may be regarded as tonic, but quinine may be given so as to be strongly stimulating or strongly sedative. And so more especially

with alcohol. Every one knows that alcohol may be taken so as to be strongly stimulating or strongly sedative; what is not so well known, unfortunately, is that this agent may also act as a tonic.

P. It is certainly news to me that alcohol may be taken so as to act as a tonic; and, even allowing that you may be right in saying so, I do not see that this agent ought to be used for ordinary dietetic purposes. Tonics, you must admit, are not wanted ordinarily. Surely common food, with no other drink than water, ought to yield all the nourishment that man really needs.

M. I don't care to fight in the cause of tonics. I will give in if you like. Indeed, all that I really meant in saying that alcohol may be used so as to be tonic in its action was to say that this agent may be made to take the place of food. On this position I take my stand, and, as I think, more safely than I could do on that which you choose to occupy. You say that common food, with water as a drink, ought to supply sufficient nourishment in all ordinary cases. Is this true in your own case? You say that your appetite has failed, and that you are not up to the mark in bodily and mental strength, and you want me

to help you. How? By giving some suitable tonic you will probably say. I do not say so. On the contrary, I tell you to take alcohol in some form or other properly and regularly, and try to dispense with the tonics you so often think you want, and are so ready to take: and I have, as I think, good reason for giving you this advice. Alcohol, properly used, is of great service, partly in keeping up the animal heat by supplying easily kindled *fuel* to the respiratory fire, partly in producing nerve-power by furnishing easily assimilable *food* to nerve-tissue, and partly in *lessening the necessity for ordinary food by diminishing the waste of the system* which has to be repaired by food. Now see how all this applies to yourself as a water-drinker. Your appetite has flagged for some time, and you are not able to eat enough to keep up your weight and strength to the proper standard; and what I advise you to do, for the reasons given, is to take a little alcohol in one form or another regularly, and see for yourself whether you cannot dispense with tonics. I have no doubt as to the result. You will soon be out of your present state of *seediness*, and that too without tonics. And what you may gain in this way you may keep by going on in the same way, and that without detriment.

P. Without detriment?

M. Yes. Not only without detriment in the vast majority of persons, but with positive advantage in a very large minority. Take two cases of water-drinkers, the one of a man with a large appetite and the means to gratify it, the other that of a poor man who cannot get sufficient food, and you will, I am sure, follow me quite easily in all that I now want to impress upon you.

The well-to-do hearty man, I will suppose, frightened, as you are, by the terrible consequences of intemperance in the use of alcoholic drinks, has set his face, as you have done, altogether against the use of these drinks for ordinary dietetic purposes, but he has not taken the trouble to make himself well acquainted with the evils consequent upon over-eating. He is blessed with a good appetite, and he indulges it without a suspicion that he is doing wrong in any way. He is, perhaps, a muscular Christian, who in all sincerity thinks that he is more likely to carry on the fight of life successfully by copying the habits of the carnivora as to eating, and trusting to the animal strength so derived, than by following the old-fashioned rule which enjoins fasting and praying and working or

waiting, not in his own name and power, but in the name and power of God. Be this as it may, however, the case supposed is that of a water-drinker with a good appetite, and with the means of satisfying it, who goes on eating and eating as if there were no such thing as over-indulgence in this direction until—what? until he finds himself, as he is sure to do sooner or later, seriously out of order in one way or another,—soon enough if he be not a strong man, before very long if he be the strongest. His powers of digestion and assimilation eventually become unequal to the task imposed upon them, and something must be done to help them. And what? Abstinence in the matter of ordinary food, you will say, is all that is wanted, and I am not disposed to say otherwise, if the vital powers of the man are, so to speak, up to a certain mark. But simple abstinence in this direction is, as I think, not all that is wanted, if from age, or from any other cause, these powers are not up to this mark; and so far as my experience goes, the simple truth is, that the man is *not* likely to get well and keep well unless he has recourse to the moderate use of alcohol habitually, partly because this practice will, by lessening the waste of the system, bring down

the amount of ordinary food actually wanted to a point in which it can be dealt with effectively by the enfeebled powers of digestion and assimilation, and partly because it will, by supplying more easily kindled fuel to the respiratory fire, and more easily assimilable food to nerve tissue, augment vital warmth and nerve-power, and in that way promote the activity of digestion and assimilation, and every other vital function. At all events, the result, so far as my experience goes, will be in every way satisfactory.

Nor is it necessary to shift from this position in order to deal, to some extent satisfactorily also, with the case of the water-drinker without the means to satisfy his appetite fully. He, for the sake of argument, I allow, would do well enough if he could get sufficient food, but this is precisely what he cannot get, and because he cannot get it, sooner or later, he, too, must break down. The poor from want of work will never cease out of the land, and this consequence of poverty, this breaking down, is inevitable. And what must be done here? I answer that in this case, as in the last, the natural remedy is to be found in the moderate use of alcohol habitually, partly for the reasons just given, but chiefly because the glass of malt liquor, or cider, or

perry, or common wine, if the man have the luck to live in a wine-growing country, will cost less than the amount of ordinary food which must otherwise be eaten in order to preserve health. I have no doubt as to the actual saving in pocket which will result from the adoption of the practice recommended, if only the prevalent delusion can be got rid of that animal food, especially meat, is the only food worthy of the name of food, and that vegetable food—bread, porridge, pudding, potatoes, beans and peas, fruit, and the rest—is to be regarded as little better than padding; and I am equally certain that the result will be as beneficial to health as it will be satisfactory financially. And I cannot help saying that he who chooses to urge the poor to forego the *proper* uses of alcoholic drinks for the simple reason that semi-drunkenness and drunkenness are, what they are indubitably, evils of incalculable magnitude, is no less than culpable—I cannot use a milder word—in a high degree.

P. Culpable?

M. I am ready to admit that I ought not to apply this word to those who would have all persons in all cases abstain from the use of alcoholic drinks because so many are ruined by them.

I know that these persons are actuated by the sincerest wish to do good to their fellow-creatures, and that they are at the worst no more than wrong-headed; but I cannot allow that goodness in the advocate for any particular cause is to be allowed to take the place of soundness in argument. Good wrong-headed people, you must allow, are very dangerous people. You must also allow that I am not too hard upon the people in question in calling them wrong-headed, if I am right in what I have said about the proper uses of alcoholic drinks. If I am right in what I have said, there is a wise as well as an unwise use of these drinks; and even if I were unable to satisfy myself by argument upon this point, I should still hold to it, for I find it impossible to suppose—as I must do if I believe that the only effect of alcoholic drinks upon man is mischievous—that the process of alcoholic fermentation in the economy of nature was a mistake on the part of the Author of nature. Moreover, I cannot but find further proof of the wrong-headedness about which I am speaking, in the common assumption, not only that drunkenness and the tendency to drunkenness is an almost universal vice, but also that it is wrong to enjoy in moderation anything which may lead to drunkenness. All my own experience in hos-

pital and private practice teaches me that drunkenness, or even a tendency to drunkenness, is the exception and not the rule—the comparatively rare exception even; and this being the case, I cannot but feel a little indignant with those who malign their fellow-creatures by maintaining the contrary. I rest upon my own experience: I leave others to deal with theirs. Nor can I consent to let pass unchallenged the other part of the assumption with which I am concerned, that it is wrong to enjoy in moderation what may lead to intoxication when taken immoderately. The normal state of humanity in respect of comfort, so far as my experience goes, is one of *minus* rather than one of *plus*; and, no doubt, it is well that it should be so, for if man were too comfortable here he would for that reason be more disposed to conduct himself as if his life were not a state of discipline for a higher life here and hereafter. Be this as it may, however, there is surely no reason that man should allow himself to be needlessly uncomfortable. On the contrary, it is highly probable that he in whom a sense of discomfort, of *màlaise*, is the one predominating feeling is not in that state of equanimity in which he can do anything well. Such a man—and his case is only too common—will be apt to be absorbed in his own sufferings

when he ought to be doing his proper work. Such a man, most assuredly, will need every legitimate means by which he can master the feelings of discomfort which prevent him from working with all his might ; and if he should have found that the proper use of alcohol is one of those means, who shall blame him ? No doubt there is a danger of making himself too comfortable by making improper use of this particular means ; but this is no real ground for blame, for every blessing of life may be made a curse to him who abuses it. Nay, it may be no unimportant part of his discipline here to learn how to practise moderation in the use of alcohol. Besides, it is not at all likely that there is any ground for uneasiness on this score, for in the majority of cases (from common sense alone, or from common sense combined with narrow means, or from finding that he must pay heavily in subsequent suffering for any over-indulgence, or for some other reason), the simple fact is that the man is perfectly sober in the true sense of the word. And here, therefore, I may fairly find, in passing, an additional reason in favour of the use of alcohol for dietetic purposes, namely in this—that alcohol when properly used is, what it is abundantly proved to be, a natural and very potent means of comfort. Nor should I be dis-

posed to speak differently if I were dealing with those who transgress the bounds of moderation in making use of this means of comfort. For I hold that a very great number of those unhappy persons have erred, not because they have liked too well what they have taken too freely, but because their feelings of habitual discomfort have been intolerable. And, for this reason, I should try to reclaim them, not by holding forth on the necessity for total abstinence from intoxicating drinks, but by teaching them to use wisely what after all may be almost a necessary of life to them. But here, as I know full well, I am on ground upon which I must not venture to tread without having more time and light to pick my steps than I have at present, and therefore I will, without venturing further in this or any other direction, step back to my former position, and there take leave of you.

P. I am content, or rather I am in that passive state of mind in which I am not unwilling to do your bidding. I, of course, allow that it is idle to say that a thing must not be used because it may be abused. I also, as far as I can follow them, accept provisionally the conclusions to which you would have me come, and all the more readily because I find in the Bible, to which as a clergyman I am bound to pay heed, many other argu-

ments to the same effect, especially that which may be founded on the use of wine in the Last Supper. At all events, as I said before, I am ready to do your bidding, without bothering you any more at present to say why, if you will tell me definitely what I am to do. What, then, am I to do? What especially about moderation in the use of the products of fermentation, and what about the choice of these products?

M. What moderation is you must find out for yourself, and all that I can do to help you in the discovery is to say that you are no longer moderate if what you have taken excites you or stultifies you, or has any other effect upon you beyond that of balancing, calming, comforting you. And as to the choice of fermented drinks, all that I can do now is to give you two or three very bald hints. Speaking generally, I may say that light wines—not excluding even home-made wines—and small beer and cider and perry are to be preferred to water with a little whiskey or some other spirit in it,—light wines, I say, not the strong brandied wines which have so long found favour in this country. Indeed, as to these strong brandied wines, I hope the day will soon come—and the signs of the times justify this hope—in which it will be felt by all that they are brandy or some

more evil spirit diluted with wine rather than the honest and comparatively innocent wine which is commonly drunk in wine-growing countries,—as, for instance, Petit Bordeaux, in France, or, better still, a *vin du pays* like that which I had the good luck to drink a few weeks ago at Orvieto in Italy,—and that for this reason they ought to be banished from the table. Nor can I make any exception even in favour of dry sherry, for what is this in too many cases but a compound made up of water, and the worst and rawest kind of whiskey, called “silent spirit,” and certain liqueurs concocted in the chemist’s laboratory—a compound which, if not altogether untravelled, has never been much further abroad than Hamburg? I hope, too, that the day is not far off when there will be more sympathy with Prince Hal’s liking for “the poor creature small beer” than with Falstaff’s craving for strong sack,—when all strong malt liquors will have gone as much out of fashion as strong wines. In many cases, I allow, water with a little good whiskey or some analogous spirit in it is, for ordinary dietetic purposes, more suitable than even good wine properly diluted with water; but these cases, I contend, form the exception and not the rule. Ardent spirits, all of them products of distillation, are wholly or in great measure deprived

in distillation of the flavouring and saccharine principles which are naturally met with in wine and malt liquor and cider and perry ; and for this reason these spirits may be, perhaps, mischievous. The cheering influence of wine, as is well known, is in no way proportionate to the amount of alcohol contained in it, and there is good reason to believe that a considerable portion of the work which is not due to the alcohol may be ascribed to these particular principles. But even if the contrary to all this held good, and it could be shown, on hygienic grounds, that water with a little spirit in it was unobjectionable as an ordinary beverage, I should still shrink from recommending such a drink, and for this reason—that a man must of necessity run a greater risk of contracting a habit of taking alcohol in excess who had a spirit decanter constantly within reach, than a man who took care to be always out of the way of temptation on this score.

X.

THE PLACE AND USES OF ALCOHOL
AS AN ARTICLE OF DIET.

BY R. BRUDENELL CARTER, F.R.C.S.



X.

THE PLACE AND USES OF ALCOHOL AS AN ARTICLE OF DIET.

WHENEVER any question is of such a nature that its final solution can be reached only by an appeal to experience, it is plain that the experience most valuable to each observer will be that which he may acquire in his own person; on account of the preciseness of the knowledge which, if he will take the necessary pains, he may obtain concerning all the facts of the case. Upon such personal experience my own convictions about the uses of alcoholic drinks have been chiefly founded; and their action, as displayed in myself, has furnished me with a clue to the interpretation of what I have witnessed in others. For this reason, and also because there is no such thing as an isolated case, whatever is true of any individual being equally true, *mutatis mutandis*, of many others, I am induced to begin these pages by a brief fragment of dietetic autobiography.

I have been accustomed, from early childhood, to the regular and moderate use of alcoholic drinks as part of my daily food; and first laid them aside in the summer of 1855, when serving at Eupatoria, in the Crimea. The weather was very hot, and it so chanced that my position on the staff of Omar Pasha entailed upon me no duties of any kind. My life was one of pure rest or idleness, at a seaside town where there was just enough variety to furnish amusement. My abstinence from alcohol was the result of a belief that English people, as a rule, are better without it when living in a higher temperature than that of their own country. I remained in perfect health; and, as colder weather returned, I resumed my accustomed habits.

In the following winter, having accompanied the Turkish expedition into Mingrelia, I was encamped some dozen miles up the river Poti, after many weeks of exposure to cold and wet, and of scanty and indifferent food. The English officers with the expedition were eleven in number; and our last bottle of rum was devoted to the manufacture of a bowl of punch on Christmas Day. Thenceforward, of course, we were compelled to be abstainers by the

want of anything, except dirty water, to drink; and, by the end of January, I was not alone in suffering from intestinal troubles of a weakening and depressing character. One happy day, however, there arrived in camp some packages of stores for our consumption; and the immediate result was a good dinner, and a "big drink." We were all much improved in health by our potations, and we returned to more civilized quarters before our means of taking a little alcohol were again exhausted.

In the summer of 1857, practising my profession in a mining district in a midland county, and daily in contact with the results of drunken habits in producing disease and domestic misery, I felt, as many others have done, that I should be a better preacher of abstinence if I practised it; and, encouraged by my recollections of the Crimean summer, I determined to be able to say to my patients, concerning drink, "No one works harder than I, and I never touch it." My life was a laborious one, requiring me to traverse, on foot or on horseback, an extensive range of country; and coal-miners, who go to their work at night, think no more of calling up the doctor on their way, and of sending him five miles to visit some trivial case which they

represent to be extremely urgent, than they would of throwing a stone at a sparrow. My habit had been to take a glass of bitter beer, or perhaps two glasses, with my early dinner, and the same quantity with my supper; never drinking spirit, and drinking wine but seldom. After about two months of total abstinence, the conviction was reluctantly forced upon me that the experiment was a failure, and that I must give it up. This is not the place in which to describe my symptoms, but they pointed, in a perfectly plain way, to an excess of waste over repair. I returned to my bitter beer, and in the course of a week was well again.

In 1862, still engaged in country practice, but in a different part of England and in a much less laborious manner, I recounted my former experience to a well-known advocate of total abstinence, who said that I had been wrong in abandoning beer without taking something as a substitute. He recommended strong coffee for this purpose, a cup to be taken daily after dinner. I determined to try again in the way which he advised, and took the coffee regularly. My abstinence lasted longer than on the previous occasion, perhaps a month longer; but it was terminated by the recurrence of the symp-

toms which I had formerly experienced, and which, this time, were noticed not only by myself, but also by another medical man, one of great experience and sagacity. I cannot say whether the longer endurance should be ascribed to the coffee, or to the fact that my work was less arduous than it had been during the continuance of the first experiment.

In 1876, having then lived for eight years the comparatively sedentary life of a London specialist, I tried total abstinence again. The experiment was terminated, on this last occasion, more quickly than before, and by a wholly unexpected result. In the course of a short time I became so sleepy in the afternoon that I could not stay in the house and apply myself to any subject requiring attention. The immediate cause of sleep is supposed to be a diminution in the quantity of blood supplied to the brain; and some physiologists tell us that one effect of alcohol is to dilate the smallest blood-vessels, so that their carrying powers are increased. Perhaps, therefore, my brain requires, as a condition of its full activity, that this dilatation should be accomplished. I do not vouch for the occurrence of the dilatation, nor do I pin my faith to the explanatory hypothesis, but I

am sure about the facts. I returned to my customary moderate drinking, and the sleepiness has vexed me no more.

In order to complete the story, I ought to say that it has been my constant habit to occupy my brain actively, both within and beyond the work of my calling; that I am a small—of late years, I think, an unusually small—eater; and that the quantity of alcohol which I can take with advantage is very limited, not exceeding half a wineglassful of whiskey, largely diluted, or half a tumbler of light wine, with luncheon and dinner. More than this is apt to produce discomfort, and, if taken late in the day, is often followed by a restless night. I have been assured, by one who is well known for the high quality of his intellectual work, that his own experience is of a similar kind. He drinks very weak brandy-and-water; and he said, "I find that a third of a wineglass of brandy is better for me than half a glass. *But I cannot do without the third.*"

If we come to inquire in what way this small dose exerts a beneficial action, we are at once met, on the part of many of the advocates of total abstinence, by the assertion that alcohol is not food. I have no inclination for a con-

troversy about words, but, if we may accept Johnson's definition of food as "anything that nourishes," I do not hesitate to say that the advocates of total abstinence are mistaken. I have recorded a case in which an old gentleman took no other food for many months, and was kept not only alive, but in moderate strength and comfort, and with no remarkable emaciation, upon alcoholic drinks alone. He liked variety, and rang the changes upon champagne, old port, brandy, the strongest Burton ale, and other liquids, some of which contained a certain amount of saccharine matter, but not enough to maintain life as he maintained it. Cases of a similar kind have been published by the late Dr. Anstie and others; and nothing is more certain than that people will live upon alcohol and water for long periods. The evidence by which this is proved seems to me altogether to outweigh the opinions of those who declare that alcohol is not food, on no better ground than that they are unable to discover how it nourishes, or what transformations it undergoes within the body.

While I fully admit, therefore, that there are many who can support vigorous life without alcohol, I nevertheless affirm, alike from my own

experience and from that of others, that there are some, I do not pretend to say how many, to whom it is a necessity if they are to exert the full measure of their powers. Those who have lived among total abstainers, and are familiar with their habits, will bear me out in the assertion that they are generally large eaters, with an especial craving for food which contains a considerable quantity of sugar. I am much inclined to think that sugar, a substance of very similar composition, may fulfil the same office in the organism as alcohol; and that the need for alcohol may vary inversely as the power of assimilating sugar, which, in many persons, undergoes acid transformation and becomes a source of discomfort. If it is necessary to advance any hypothesis on the subject, the weight of probability seems to me to rest with the belief that alcohol, within certain limits of quantity, undergoes such decomposition as to liberate force which may be applied to the maintenance of vital processes, and that it is also a source of stability by diminishing the waste or disintegration of tissue. I incline to the belief that it not only supplies force itself, but that it also retains within the body other materials which may render the same service.

As regards the action of alcohol in disease, I believe there is an entire agreement, among all

medical men whose declarations of opinion are entitled to respect, that there are conditions in which it is a valuable remedy. Dr. Richardson, for example, whose earnest advocacy of abstinence is so well known, does not hesitate to prescribe alcohol as a medicine; and I presume that the chief differences of view with regard to it would have reference to the frequency of the conditions in which it is required, or to the relative place which should be assigned to it in a certain class of medicinal agents. But it is interesting to note that nearly every practitioner finds it to be of especial value in that particular department of the healing art in which he himself has the largest and the most constant experience. The physician describes its efficacy in certain forms of internal inflammation and of fever; the surgeon describes its efficacy in conditions consequent upon injury. Perhaps the most remarkable testimony ever borne to its usefulness is that of a distinguished ophthalmic surgeon, Dr. Gustav Braun, of Moscow,* who, a few years ago, was accustomed to lose no less than 45 per cent. of the eyes on which he operated for cataract in his hospital, that is to say, among badly nourished Russian peasants. He was not singular in this experience, for his col-

* Archiv f. Ophthalmologie, Bd. xi. Abth. 1, s. 200.

league, Dr. Rosander, was equally unfortunate. At length, after trying many expedients, including the use of quinine and other tonic remedies, Dr. Braun administered a dose of brandy or of sherry to every patient immediately after operation, and repeated it twice a day for two or three days. The result of this plan was, after a year's trial, to reduce the number of cases in which the eye was totally lost from 45 to 6 per cent., with an additional 3 per cent. of imperfect recoveries. Nothing was altered in the mode of operating, or in the other treatment ; and Dr. Braun asserts that the improvement was attributable to the alcohol alone. Within the last few weeks I have myself had occasion to give brandy, disguised as medicine, to a gentleman far advanced in age, who had nearly all his life been a total abstainer, and in whom the dose certainly saved both his eyes from perishing after an operation. It may be that other agents would produce the same effects as alcohol ; but, as a matter of fact, even those who have theoretical knowledge of these agents are seldom sufficiently versed in their employment to feel safe in discarding the old familiar friend. When the integrity of an important function, or even life itself, is at stake, no conscientious physician or surgeon will venture upon coquetting

with new remedies, so long as he has at hand those tried ones with which his experience has been gained. To use the homely illustration of President Lincoln, it is bad to change * horses while crossing a stream ; and the feeling which induced David to prefer his sling to the weapons with which Saul furnished him is likely, I think, to prevail among all who are acquainted with the value of alcohol, and who have realized the meaning of responsibility.

It will be seen that I have endeavoured, throughout this paper, to place the question upon purely empirical grounds, and, in truth, I do not recognize the existence of any others. It is conceivable that we may some day understand the digestive and assimilative processes completely, and may be able to trace out the course and action of food and drink in the economy. At present, we are not even at the threshold of such knowledge, and there is no reason to believe that the hypotheses which

* I am told that Lincoln said "swop"; but, if so, the word seems to me neither to convey his meaning nor mine. I understand swop to mean to *exchange*—to change ownership—while the change referred to is one of use. Two men may swop horses in crossing a stream, and only "change" on the further bank ; while a man may "change" in mid-stream from one of his own horses to another, and may get a ducking in the process.

are in vogue to-day will have any longer existence than those which have preceded them. A few years ago, we were told by chemists that all the solid framework of our bodies was in a state of continual destruction and renewal, and that the destination of nitrogenous food was to supply materials for the never-ending repair. We are now tolerably sure that the tissues do not waste and change to the extent which was once believed, and that food is required to supply force rather than material ; but, although it is a gain to have discarded a false hypothesis, it does not follow that we are any nearer to the possession of a true one. We may assure ourselves by common observation, that the moderate consumption of alcohol is useful to many persons, and that it does not produce, at least necessarily, or in any but exceptional cases, the dire effects which have been ascribed to it. These two positions, as the teachings of experience, appear to me to be as unassailable as the familiar knowledge which we have of alcoholic excess as one of the chief causes of misery and disease among men ; but the argument for discarding the use of anything, for fear of the consequences of its abuse, is one to which the majority of mankind will turn a deaf ear as long as human nature retains any semblance of its

present characteristics. The claims of chemistry and physiology, in the actual state of those branches of inquiry, to regulate our habits in conformity with their fleeting hypotheses, are as ludicrous as anything that Swift imagined in the University of Laputa ; and it is high time that the intelligence of mankind should assert itself in opposition to the pretensions of sham science. The tendency of the day is to exalt what is technically called "research," as opposed to ratiocination ; and one consequence of this tendency is that a number of otherwise unemployed and unappreciated persons set themselves to work with microscopes and test-tubes, and fancy that they are making discoveries. The laborious trifling of six months is then described as a "research"; and the conclusions of the great unknown who makes it are regarded as part of the general stock of knowledge for the six months longer which may possibly elapse before these conclusions are overthrown by somebody else. The ordinary sequence of events is that the iconoclast sets up his idol in its turn, which in like manner is dragged through the dirt by his successor ; and the common people, who are not scientific, are expected to worship at each shrine as long as it endures. For much of all this we are indebted, of course, to the impatience

of slow processes which is characteristic of the age, and to the modern facilities for gaining notoriety; but, before we can hope to regulate our diet on any broader basis than experience, we must witness a return, on the part of the scientific community, to the patient industry and the habitual caution of an earlier generation; and we must see these habits guided, when the time comes, by the powers of insight and of generalization which are given, once in a century, to a philosopher who stamps the mark of his genius upon the epoch in which he lives.

I have written so far about "alcohol," as if under the dominion of the teetotal delusion that all liquids which contain it are of the same general character, and produce the same effects. Against this delusion, however, it is necessary formally to protest. When obtained by any simple method of fermentation or distillation, alcohol is mingled not only with water, but also with various substances derived from the fruit, the grain, or other vegetable matter which furnishes it. Alcohol is a very powerful solvent, and it retains most of these substances in solution. They influence its action in various ways; and every one who is practically acquainted with the subject is aware of the different effects

which different kinds of alcoholic drinks will produce. In many instances, too, the non-alcoholic fruit or grain products undergo great modifications by keeping; and this to such an extent that between new and old wine, or new and old spirit, there may be little in common but the name. Differences of either class are as inappreciable by teetotalers, generally speaking, as the differences in a chromatic scale by the blind; but the former are no less real than the latter. Of late years, however, and chiefly by means of a machine which is called a "patent still," manufacturers have succeeded in separating alcohol from the other products with which it was formerly always associated; and the consequence is that spirit is now distilled very cheaply, from materials which would communicate a nauseous flavour if anything more than alcohol and water were brought over in the process. In commercial language, the spirit thus made is called "silent," because it does not betray its origin; and the chemists who are employed by advertisers testify to what they are pleased to call its "purity." It is neither brandy, nor whiskey, nor rum, but is artificially flavoured for sale in such a manner as to admit of being called by one or other of these names. What-

ever it may be called, it is simply nude alcohol divorced from its natural alliances; and it is worthy of note that this nude alcohol is the agent chiefly concerned in the production of those organic changes which Dr. Moxon has described in his paper in such graphic language. A man who is sinking into sottishness loses his palate, while he retains a lively appreciation of cheapness. He does not mind the nastiness with which cheapness is proverbially associated; and he seeks for a degree of concentration in his drink which the manufacturer of silent spirit is able to supply at a small outlay. Hence it is quite possible that many of the denunciations commonly levelled at "alcohol" may approach much more nearly to the truth when applied to the nude forms of it which are in common use among sots and the labouring population, than when applied to the alcoholic drinks which are in use among the temperate and the well-to-do. Of course even the latter kinds may be taken in such quantities that the alcohol in them will reduce the other ingredients to insignificance; but this is not the way in which they are ordinarily consumed. The palate which can appreciate flavour is scarcely in danger of leading its owner into excess; and there can be little

doubt that the alcoholic liquids in which a natural flavour is retained are far less dangerous than those, unfortunately too common, in which flavour, if it exists, is the result of artificial admixtures.

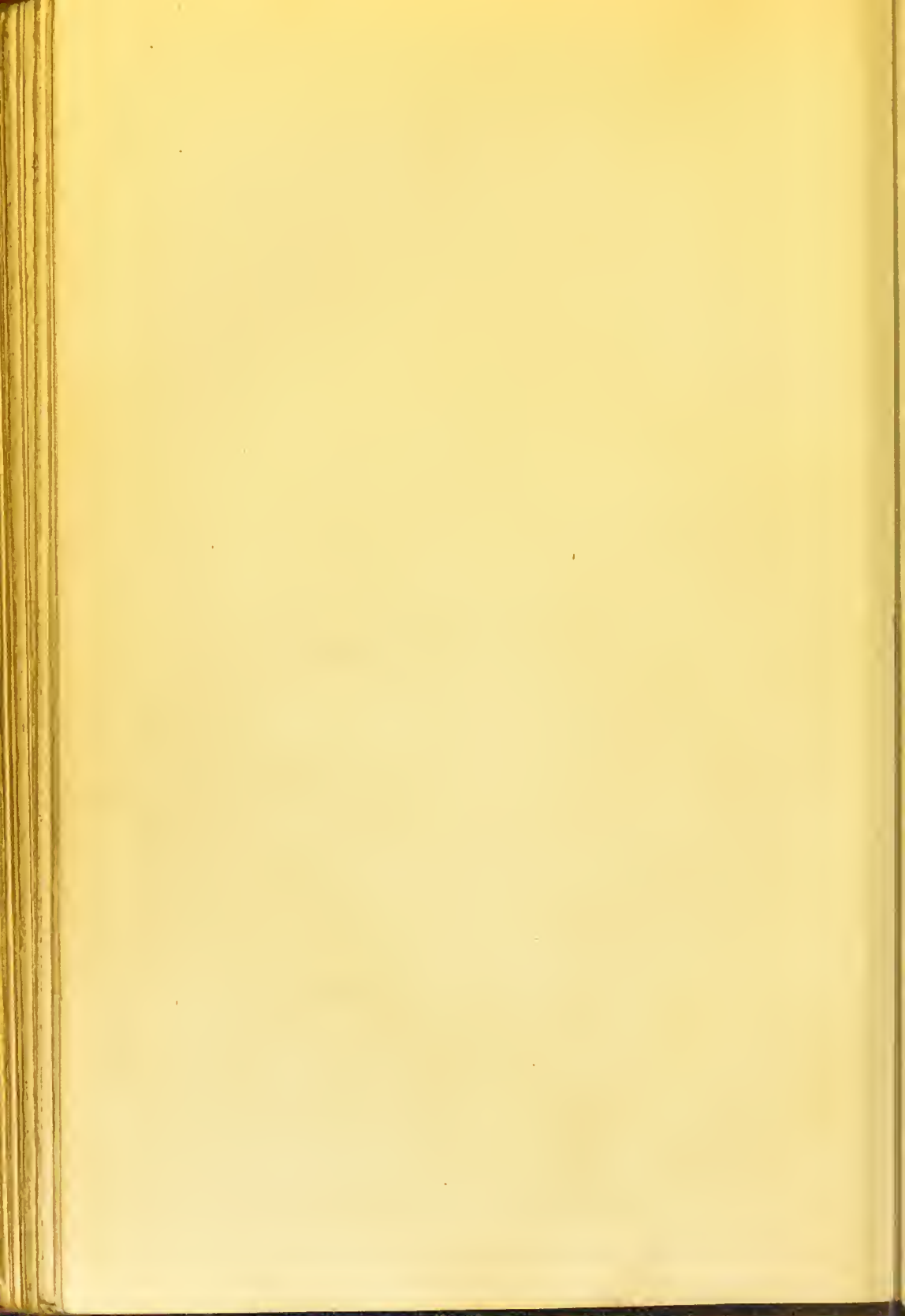
The use of alcohol is a question upon which any writer, who has formed opinions and who has seen no reason to alter them, can only repeat himself. The substance of these pages appeared a year ago in a medical journal, and called forth several communications of greater or less interest ; while total abstainers, writing in various other publications, were induced to assail me with such rhetorical weapons as they could command. Fortunately for my safety, there was more smoke than impact, more powder than ball ; and the appearance of many pages covered with printed characters furnished me with nothing to refute.



XI.

RESULTS OF EXPERIENCE IN THE
USE OF ALCOHOL.

By ALFRED B. GARROD, M.D., F.R.C.P., F.R.S.



XI.

RESULTS OF EXPERIENCE IN THE USE OF ALCOHOL.

WHAT the public really want to learn from the medical profession on this subject seems to me to be this: How far can the moderate taking of alcoholic drinks be indulged in without producing any evil effects on the system; reference being had to the artificial circumstances under which most of us live, and to the strain on the nervous system resulting from the wear and tear of modern life?

To answer this question to the best of my ability, and with as much definiteness as my experience has enabled me to arrive at, will be my effort in the following pages.

The use of alcoholic beverages in some form, as malt liquors, wines, or distilled spirits, is so universally diffused among European nations and their offshoots, and is of so great antiquity, that a natural hesitation arises to prevent our coming to the conclusion that, taken in moderate quantities,

they are prejudicial to health ; and it is at the present day a most important and "burning question" to ascertain the real truth as to the benefit or the mischief arising from their employment.

In discussing the question it is desirable at the outset to have some idea of the nature of alcohol and of the changes which it undergoes when it is taken into the system, seeing that many deductions with respect to its properties and their beneficial or mischievous effects have been put forward and somewhat hastily accepted, though they have started from purely theoretical considerations rather than from a firm basis of practical experience.

With regard to its direct and immediate action on the parts with which it first comes into contact when swallowed, it is well known that alcohol, if taken in a concentrated form, such as distilled spirits, acts as a powerful irritant, and tends not only to injure the mucous membrane of the gullet and stomach, but also, when digestion is going on, to arrest it, by altering the properties of the pepsine or digestive principle which at such a time is present in the stomach ; if, on the other hand, it is taken in a very dilute form, it serves only to stimulate the membrane, and to increase the secretion of the gastric or digestive fluid, without in any way injuring its character. After a time,

the length of which depends much upon the state of the stomach as to food, alcohol becomes absorbed by the veins of the surface, passing thence to the liver and ultimately into the general circulation ; the liver being the organ chiefly affected by it, after its absorption, though it also influences the other organs and tissues of the body.

The question as to what ultimately becomes of the alcohol taken into the system is one of the highest importance, as we shall see later on. The view which was propounded by the late Baron Liebig was that it becomes destroyed and converted into other compounds, acting as a heat-producing body or fuel to the system ; but within the last few years observations have been made which show that alcohol in an unchanged state passes out of the body through the breath, perspiration, and other secretions, even when taken in very moderate quantities ; hence, as has been conclusively shown by many trustworthy experimentalists, hasty and erroneous conclusions have been drawn, for, although alcohol is thus detected, yet only comparatively small quantities are eliminated in this way from the system, by far the greater bulk being converted into other compounds before it is finally thrown out. The incorrect conclusions above mentioned have, however, led to

objections to the use of alcohol in any, even the smallest, quantities. It has been argued that, all the alcohol imbibed escaping from the system in an unaltered form, it can in no way act as food, but can only do injury. But even if it were true that none of it undergoes modifications in the system, this would in no way justify the conclusions drawn from this now disproved premiss, for it is quite possible that its temporary presence may be of value as giving increased activity to various functions, for there are other articles of undoubted value, such as common salt, which, after a certain sojourn in the body, are thrown out in the same condition as when taken into the system.

I think it most convenient to give the results of my experience of the use of alcohol in the form of propositions, each of which will be shortly discussed.

- I. *The majority of adults can take a moderate quantity of alcohol in some form or other, not only with impunity, but often with advantage.*

I have purposely limited the use of alcohol in the above proposition to adults, as I am of opinion that during the growth of the body, when the

function of nutrition is in a state of great activity, there is little or no need for its employment; of course, my remarks are strictly confined to healthy children; for, as a medicinal agent, alcohol may be often used with advantage in the treatment of the young. There are many facts which show that by the use of alcohol in some of the lower animals the growth of the body may be checked or stunted, and possibly the same applies to children. It is also probable that when any one has arrived at adult age without having taken alcohol, the same abstinence may often be continued, not only without inconvenience, but in many cases with advantage.

It must be remembered that there exist certain peculiarities, or what may be termed physical idiosyncrasies, in different people, which show themselves in reference to alcohol as well as many other articles of diet; it is well known that some cannot take tea or coffee without experiencing unpleasant results; some are intolerant of tobacco in any shape; in some the white of the egg always disturbs; in others shell-fish; and one instance has come under my notice in which any fish belonging to the order *Pleuronectidæ* invariably caused violent disturbances, although every other kind of fish, as well

as molluscs and crustacea, could be taken with impunity: this last case is the more remarkable as the sole, brill, turbot, flounder, plaice, etc., are usually looked upon as fish of easy digestibility. The same holds good with regard to alcohol: there are some few who cannot take it without discomfort, and, of course, for such people total abstinence is most desirable. Passing over these exceptional instances it will be found that by far the greater number can partake moderately of alcohol, not only without any injurious consequences arising from it, but with positive benefit; and as it is a source of much enjoyment, and discomfort often springs from its discontinuance, it is difficult to say why it should be discontinued under ordinary circumstances. It is of course well known that there are many nations that thrive without alcoholic drinks; nations, for example, professing the Mohammedan faith, and to whom alcohol is forbidden by their religion; but on further inquiry it will be found that amongst them the use of the stronger narcotics, such as opium and Indian hemp, is extremely common, and the exchange from alcohol to these narcotics can scarcely be looked upon as a gain. As yet there are no trustworthy statistics to show that abstinence from the moderate use of alcohol

is attended with unusual length of life or improvement in health.

2. *As a beverage, alcohol should be taken in very moderate quantities, freely diluted, and usually at or after meals.*

It is a matter of no little difficulty to define what is meant by a *moderate quantity*, and experience shows that this differs much in different individuals, and in the same individual under different circumstances; still it is a matter of much importance to endeavour to arrive at something like what may be regarded as an average amount which can be taken daily without the probability of its causing any present or remote injury to the system. My own opinion, based upon a great number of careful observations, is, that the quantity of alcohol taken in the twenty-four hours should seldom exceed that contained in half a bottle of claret of good quality; and it will be found that, in the case of French bottles, this is very little more than half an imperial pint, or eleven fluid ounces. The amount of absolute alcohol in claret may be taken at 8 per cent., and therefore, if we reduce the claret to pure or absolute alcohol, this would fall short of a fluid ounce by more than one-tenth. Many

observations were made at the Netley Hospital by the late Dr. Parkes, on the influence of alcohol in the form of distilled spirits and claret,—the subject of these experiments being a soldier,—and it was found that nearly one ounce* of pure alcohol (in the form of ten fluid ounces of strong claret) could be taken without causing any very appreciable symptoms, whereas when twenty fluid ounces, or an imperial pint, was substituted for the smaller quantity, the man became hot and uncomfortable and flushed, his face became congested, and slight drowsiness was induced; at the same time alcohol began to appear in some of the secretions. The man was one who appeared to be very easily brought under the influence of spirit, and seemed to thrive very well without it; he had gone through the Abyssinian campaign, and had found that when the force was without rum, owing to the deficiency of transport, he had in no way felt the want

* As the public are often not acquainted with the smaller divisions of the imperial pint, it may be well to state that the fluid ounce is a twentieth part of that measure, that when it consists of pure water it weighs an avoirdupois ounce, or the sixteenth part of the pound. Two tablespoonfuls of any liquid measured in a medicine glass is the same as a fluid ounce, but when measured in the modern tablespoon it generally far exceeds that quantity.

of the stimulant, although some of his comrades suffered. It will be well to give an idea of the proportion of absolute alcohol contained in the different beverages ordinarily indulged in. In brandy an ounce is contained in two ounces and a quarter of that spirit; in whiskey and rum the same proportion holds good, assuming these to be about ten degrees under Excise proof. Gin is usually weaker. In port wine, one in about five to six ounces; and the same holds good with regard to the different kinds of sherry, as also Madeira and Marsala. In champagne one in ten, as also in Burgundy; and in Bordeaux (claret) about one in twelve. In strong ales (Burton), one in twelve; in pale ales, one in sixteen. In porter, one in twenty-five; in stout, one in sixteen. These numbers are to be considered as approximations only, as differences of strength are often found in wines and malt liquors of the same names.*

The quantity of the different beverages which

* It is important to remember that the percentage of alcohol as measured by the Excise differs much from the calculations given above. The Excise standard is proof spirit, which contains 49 parts of absolute alcohol to 51 parts of water, and therefore each degree of proof spirit is rather more than two of absolute alcohol. Claret would contain about 17 per cent. of proof spirit.

we have given above must be looked upon as quite the maximum which should be taken, and many would find it more than is really suitable to their constitutions, and would be better if only two-thirds or even less were taken; and it may be regarded as a prudent rule never to take so much alcohol as will cause flushing of the face, heat of surface, marked quickness of pulse, or subsequent thirst. If a man is taking full exercise in the open air, more alcohol can be taken without the production of physiological symptoms than when he is remaining quiet at home.

The extent to which the alcohol contained in any beverage is diluted is a matter of some importance; for if taken in a very concentrated form, alcohol may irritate and even influence the mucous membrane of the stomach. It is, therefore, very desirable that its percentage in the liquid should be small. The light French and German wines are quite strong enough, and many find advantage even in the case of these in the addition of water. The Frenchman dilutes his Bordeaux. This is at least one of the reasons why so many can take claret or hock with benefit to their digestion, who find the stronger Peninsula wines, as port and sherry, cause acidity and

heartburn. I say one of the reasons, because the stronger wines contain matters from which the fully fermented light wines are free, and these probably are partly a cause of the indigestion.

The last point to be discussed under this proposition is the time at which alcohol should be taken. As one of its chief uses is to stimulate the stomach, increase the secretion of gastric juice, and aid digestion, it should, as a rule, be taken at meal times, or very shortly afterwards, during the time the digestive process is in operation. If taken on a completely empty stomach its effects are much more powerful, not only upon the stomach itself, but upon the system at large, on account of its being rapidly absorbed into the circulation. Hence it is so apt to be taken at such times to relieve nervousness and worry, an effect desirable when it is employed strictly as a medicine, but the habit is one to be deprecated severely when it takes the shape of "morning nips" with men, and the "glass of port at eleven" with women.

My counsel to patients as to the time of taking alcohol is this: "Never take any before the mid-day meal," and to many it is prudent to advise them to wait till a late dinner before indulging in any such beverage.

3. *Many can abstain from their accustomed alcohol without any unpleasant result, and some with marked advantage; but others, when they have ceased to take it for a little time, experience symptoms indicating that the nutrition of the system is not fully kept up.*

That very many who have been accustomed to the use of alcohol for a long period of time can leave it off completely is a matter of every-day experience, and the fact need scarcely occupy our attention. That some do so to advantage is indubitable; but, on the other hand, it is equally true that many suffer seriously from the omission, not only for a few days, which would naturally be expected, but more especially after the abstinence has been maintained for weeks, months, or even years. A very common effect at first is a feeling of chilliness, probably from imperfect digestion, and possibly from the withdrawal of a slight warmth or increase of temperature which alcohol often produces. This chilliness may pass off after a time if the stomach regains its power and the function of digestion becomes improved; but in some this is not the case, and the longer the abstinence the more prominent the symptom becomes, added

to which there is a feeling of heaviness and discomfort after taking any food which taxes the digestive organs. The absence of other stomachic stimulants will often cause similar discomfort; for example, those who have been accustomed for many years to the use of strong curries and other spices cannot suddenly leave them off with impunity. Another ailment very apt to ensue is some form of neuralgia, which is almost certain to become developed in those who have at any previous time been subject to it.

Others, again, are apt to suffer from boils under the same circumstances, and I have known those who from various motives have been most anxious to abstain from alcohol, yet have been unable to do so for any length of time on account of their health failing under the trial. There are many who can abstain for a week or two, not only without suffering, but with advantage, but some who are quite unable to persevere in such a course.

I am fully of opinion that individuals in whom the nervous system is much taxed require a moderate quantity of alcohol far more than those who are accustomed to great physical exertion; it is mental rather than physical labour which demands it. By the former the digestive powers

are often lowered in tone through the exhaustion of the nervous system; by the latter, on the other hand, both the digestive and nutritive functions are usually enhanced.

4. *Alcohol in the different combinations in which it exists in the various fermented liquors produces different effects upon the system, and discrimination is necessary in the selection of beverages by different individuals.*

As yet our attention has been directed to the action of alcohol *quâ* alcohol, and the forms of combination have been disregarded; it will be desirable now to consider the nature of some of the principal combinations in which it is found, and point out any influence produced by such combination. They can conveniently be grouped under the three heads of distilled spirits, wines, and malt liquors.

The members of the first group, including brandy, whiskey, rum, gin, and Hollands, are spirits with little more than traces of volatile matters derived from the substances from which they are distilled: thus brandy (Cognac) distilled from French wines contains some œnanthic or wine ether which appears to influence the action

of the alcohol on the stomach; hence it is often used when that organ is disturbed. Whiskey, when new, contains amylic alcohol (fusel oil), but when kept long in wood it loses this acrid principle and becomes nearly a pure spirit, and may be used when little more than alcohol itself is required. Gin and whiskey contain juniper oil in small quantities, which usually produce an action on the kidneys.

The wines which constitute the second group must be subdivided into the light and stronger varieties. All true wines result from the fermentation of the juice of the grape, but the process of manufacture differs considerably, and very different products are thus obtained. The light wines are made by completely fermenting the juice, and nearly all the sugar of the grape is converted into alcohol, the amount of which never exceeds 12 per cent., for more than this cannot be produced, as the alcohol already formed, when it arrives at this strength, arrests further fermentation. In grapes grown in the Bordeaux and Burgundy districts the amount of sugar is not equal to the production of a wine containing 12 per cent. of pure alcohol, and hence, after fermentation, there is a complete absence of sugar; if the amount of sugar

were much larger in the grape-juice a portion would be left unfermented.

In making the stronger Peninsula wines, such as port and sherry, there is an addition of spirit to the very partially fermented juice; hence much of the sugar remains, and the wine is fortified by the added alcohol. There is likewise much difference between the light and stronger wines in regard to the saline constituents, a difference of great importance as regards their action on the system. The lighter wines are rich in acid tartrate of potash (cream of tartar); the stronger varieties have but very little of this salt, as it is precipitated in the casks from the presence of the larger amount of alcohol which renders it insoluble. Apart from their alcoholic strength, the physiological action of these two varieties of wine is by no means the same. The absence of sugar and the presence of the cream of tartar in the lighter wines cause them to sit easier on the stomach, and subsequently to be eliminated more readily from the system than the stronger kinds of wine; there is also something in partially fermented wines which has the power of causing in many people a form of dyspepsia and ultimately of inducing a gouty state of system, an effect

scarcely ever produced by the fully fermented light wines.

The third group of beverages includes the various malt liquors, as ales, porter, stout, etc., in most of which the alcohol, although more diluted than in the lighter wines, is combined with sugar, gum, and other matters derived from the malt and hops; these substances act to some extent as stomachic and nutritive agents, are often useful in debility, but as a rule are apt to induce disturbance of the stomach and an alteration in the function of the liver, and its consequences, unless their use is combined with a considerable amount of physical exercise. The discontinuance of malt liquors is as a rule more felt by those who have been accustomed to them than the disuse of wines or spirits, but after middle age there are few people of sedentary habits who are able to indulge in them with comfort.

The results of the discussion of the four propositions may in a few words be thus summed up:—

Most people can partake moderately of alcohol without prejudice to their health, many with benefit.

Few can take much without at least ultimate injury.

As a beverage, alcohol should be drunk freely diluted.

Different combinations of alcohol should be selected by different constitutions.

The question of the value of alcohol as a medicine I have purposely avoided, as being one of a purely professional nature, and scarcely adapted for these pages.

Those who without the use of any alcohol can keep up their full bodily health, and who have reasons for abstaining from it, are certainly fully justified in so doing; but it is questionable if they are equally justified in speaking in disparagement of others who may not have arrived at the same conclusions on this subject as themselves.

In concluding these remarks on the Alcohol Question one can hardly help referring to a book in which the use of wine and strong drinks is constantly referred to, a book whose writings extend over very many hundreds of years, and its history over thousands. In both the Old and New Scriptures the moderate use of wine is certainly sanctioned, and even to some extent encouraged. In the Old Testament, vineyards are often spoken of among the blessings of the nation; and the first miracle recorded of the

Founder of our religion was the turning of water into wine at a marriage feast. On the other hand, we must not lose sight of the frequent denunciations found in the same writings of the abuse of wine and strong drinks. Suffice it to give the words of the prophet: "Woe to them that rise up early in the morning, that they may follow strong drink, and continue until night, till wine inflame them!"

932-4, 23





